



**LOUDSPEAKERS, LOUDSPEAKER  
SYSTEMS. MICROPHONES  
SALES PROGRAMME**

The KOVO Foreign Trade Corporation takes the liberty of submitting to your attention their sales programme of TESLA products, containing information relating to loudspeakers, loudspeaker systems, microphones and their appropriate accessories.

- O A wide assortment of modern-design loudspeakers allows extensive utilization possibilities when building-up sound equipment for most versatile applications.
- O Loudspeaker systems for quality reproduction at home and for Hi-Fi.
- O Loudspeaker systems for musical ensembles.
- O Monitor loudspeaker for broadcast studios.
- O Loudspeaker boxes for improving and widening reproduction derived from radio receivers, TV receivers and transmission equipment.
- O Loudspeakers and equipment for providing industrial enterprises, sports stadiums and free-space areas with sound.
- O Headphones (earphones)
- O Microphones and accessories.



# LOUDSPEAKERS

In order to offer a clearer survey the loudspeakers are classified into several groups according to their modes of application, e. g. loudspeakers for pocket and handbag receivers, loudspeakers for use in connection with record players and tape recorders, woofers, tweeters, etc.

The loudspeakers for wider application fields are classified according to their sizes. All data are contained in clearly arranged tables with references to the individual illustrations and dimensional drawings in which the main dimensions in mm are specified.

Magnets made of PERMAG-AOK alloy (with the power product value of 5 MGOe min.) or magnets with anisotropical ferrite, with min. 2.7 MOe power-product value — marked D 270 —, or of the 3.3 MOe power-product value — marked D 330, are used in the production of loudspeakers.

Radiating diaphragms, mostly of skew-surface shape, made of suphite cellulose milled on a hydrodynamic generator, attain great rigidity, whilst the specific weight is low and the damping is of sufficient value. The impregnation of diaphragms increases their resistance to external influences, gives them a perfect nonwetting property and suppresses the occurrence of sub-harmonic tones. The loudspeakers are tested and approved by an authorized test station and marked.

Special requirements can be satisfied by individual modifications of the existing types or by incorporation of new constructional details. Any demands calling for adaptations have to be discussed and settled with the producer.

# LOUDSPEAKERS FOR POCKET & HANDBAG RECEIVERS. FOR RECORD PLAYERS AND TAPE RECORDERS

Dimensions	Impedance Ω	Commercial denomination	Dimensional drawing	W Power in- put maxim.	Peak value W of max. po- wer input	Natural resonance c/s	Frequency range c/s	Character- istic sen- sitivity	Sort of the magnet, material	FLUX density	kg Weight
d 38	8	ARZ 087	1	0.15	0.20	400—560	400— 8000	81	PERMAG-AOK	0.7	0.034
d 38	25	ARZ 097	1	0.15	0.20	400—560	400— 8000	80	PERMAG-AOK	0.7	0.034
d 38	75	ARZ 098	1	0.15	0.20	400—560	400— 8000	79	PERMAG-AOK	0.7	0.034
d 50	8	ARZ 085	2	0.25	0.35	360—530	350— 5000	85	PERMAG-AOK	0.7	0.04
d 50	25	ARZ 096	2	0.25	0.35	360—530	350— 5000	84	PERMAG-AOK	0.7	0.04
d 50	75	ARZ 094	2	0.25	0.35	360—530	350— 5000	83	PERMAG-AOK	0.7	0.04
d 50	2X30	ARZ 084	2	0.25	0.35	360—530	350— 4500	83	PERMAG-AOK	0.7	0.04
d 65	8	ARZ 081	3	0.25	0.35	350—500	350— 5000*	85	PERMAG-AOK	0.7	0.045
d 65	8	ARZ 082	3	0.60	0.70	480—700	480— 4500	84	PERMAG-AOK	0.7	0.045
d 65	8	ARZ 088	3	0.25	0.35	350—500	350— 6000	86	PERMAG-AOK	0.7	0.045
d 65	16	ARZ 090	3	0.25	0.35	350—500	350— 6000	85	PERMAG-AOK	0.7	0.045
d 65	20	ARZ 089	3	0.25	0.35	350—500	350— 6000	85	PERMAG-AOK	0.7	0.045
d 65	25	ARZ 091	3	0.25	0.35	350—500	350— 5000*	84	PERMAG-AOK	0.7	0.045
d 100	4	ARZ 385	4	1.50	2	120—180	120— 7000	87	PERMAG-AOK	0.65	0.1
d 100	8	ARZ 389	4	1.50	2	120—180	120— 7000	86	PERMAG-AOK	0.65	0.1
d 100	12	ARZ 391	4	1.50	2	120—180	120— 7000	85	PERMAG-AOK	0.65	0.1
d 100	16	ARZ 387	4	1.5	2	120—180	120— 7000	85	PERMAG-AOK	0.65	0.1
d 100	2	ARZ 383	5	1.50	2	140—200	140—12000	90	PERMAG-AOK	0.95	0.35
d 117	4	ARZ 392	6	1	2	120—180	120— 8000	91	PERMAG-A	0.9	0.38
d 117	5	ARZ 382	6	1	2	120—180	120— 8000	91	PERMAG-A	0.9	0.38
d 117	8	ARZ 348	6	2	3	120—180	120— 8000	90	PERMAG-A	0.9	0.38
d 117	25	ARZ 341	6	1	2	120—180	120— 8000	89	PERMAG-A	0.9	0.38
d 165	4	ARZ 572	7	3	3	80—120	80—10000	92	D270	1.0	0.50
125X80	4	ARZ 384	8	1.50	2	160—270	160— 8000	86	PERMAG-AOK	0.65	0.09
125X80	8	ARZ 388	8	1.50	2	160—270	160— 8000	85	PERMAG-AOK	0.65	0.09
125X80	16	ARZ 386	8	1.50	2	160—270	160— 8000	84	PERMAG-AOK	0.65	0.09
180X80	4	ARZ 489	9	1.50	2	130—180	130— 6000	87	PERMAG-AOK	0.7	0.45
180X80	8	ARZ 488	9	1.50	2	130—180	130— 6000	86	PERMAG-AOK	0.7	0.45
180X80	25	ARZ 487	9	1.50	2	130—180	130— 6000	85	PERMAG-AOK	0.7	0.45
280X80	4	ARZ 689	10	2	3	95—145	95—15000	87	PERMAG-AOK	0.7	0.28
280X80	4	ARZ 662	11	2	3	95—145	95—15000	90	D270	1.1	0.45

The preemphasis of the ARZ 081 and ARZ 091 loudspeakers (marked with asterisk "\*"\*) applies to the frequency range of 2 to 3 kc/s.

# LOUDSPEAKERS OF UNIVERSAL APPLICATION

Dimensions	Impedance	Commercial denomination	Dimensional drawing	W Power in- put maxim.	Peak value W of max. po- wer input	Natural resonance c/s	Frequency range c/s	Character- istic sen- sitivity	Sort of the magnet, material	T FLUX density	kg Weight
125X 80	4	ARE 389	12	1.5	3	160—270	160—15000	86	PERMAG-AOK	0.7	0.19
125X 80	4	ARE 367	13	1.5	3	160—270	160—15000	89	D270	1.0	0.34
125X 80	8	ARE 366	13	1.5	3	160—270	160—15000	88	D270	1.0	0.34
160X100	4	ARE 489	14	2	3	110—160	110—15000	87	PERMAG-AOK	0.7	0.21
160X100	8	AER 485	14	2	3	110—160	110—15000	86	PERMAG-AOK	0.7	0.21
160X100	4	ARE 467	15	2	3	110—160	110—15000	90	D270	1.0	0.36
160X100	8	ARE 466	15	2	3	110—160	110—15000	89	D270	1.0	0.36
205X130	4	ARE 589	16	3	4	80—120	80—14000	88	PERMAG-AOK	0.7	0.23
205X130	4	ARE 567	17	3	4	80—120	80—14000	91	D270	1.0	0.39
255X160	4	ARE 689	18	5	6	60—90	60—10000	90	PERMAG-AOK	0.85	0.46
255X160	4	ARE 667	19	5	6	60—90	60—10000	93	D270	1.1	0.79
255X160	6	ARE 668	19	5	6	60—90	60—10000	92	D270	1.1	0.79

Dimensions	Impedance	Commercial denomination	Dimensional drawing	W Power input maxim.	Peak value W of max. power input	Natural resonance c/s	Frequency range c/s	Characteristic sensitivity	Sort of the magnet, material	Flux T	kg Weight
0 100	4	ARO 389	20	1.50	3	150—220	150—15000	86	PERMAG-AOK	0.7	0.18
0 100	8	ARO 388	20	1.50	3	150—220	150—15000	86	PERMAG-AOK	0.7	0.18
0 100	50	ARO 385	20	1.50	3	150—220	150—15000	85	PERMAG-AOK	0.7	0.18
0 100	4	ARO 367	21	1.50	3	150—220	150—15000	88	D270	1.0	0.34
0 127	—	—	22	—	—	—	—	—	—	—	—
0 127	8	ARO 461	23	2	3	90—140	90—12000	88	D330	1.0	0.36
0 165	4	ARO 589	24	3	4	80—120	80—12000	90	PERMAG-AOK	0.7	0.23
0 165	8	ARO 588	24	3	4	80—120	80—12000	89	PERMAG-AOK	0.7	0.23
0 165	16	ARO 587	24	3	4	80—120	80—12000	88	PERMAG-AOK	0.7	0.23
0 165	4	ARO 567	25	3	4	80—120	80—12000	93	D270	1.0	0.39
0 165	8	ARO 568	25	3	4	80—120	80—12000	92	D270	1.0	0.39
0 203	4	ARO 689	26	5	6	60—90	60—10000	92	PERMAG-AOK	0.85	0.45
0 203	8	ARO 687	26	5	6	60—90	60—10000	91	PERMAG-AOK	0.85	0.45
0 203	15	ARO 685	26	5	6	60—90	60—10000	90	PERMAG-AOK	0.85	0.45
0 203	4	ARO 667	27	5	6	60—90	60—10000	95	D270	1.1	0.84
0 203	8	ARO 666	27	5	6	60—90	60—10000	94	D270	1.1	0.84

## TWEETERS

Dimensions	Impedance	Commercial denomination	Dimensional drawing	Power input maxim.	Peak value of max. power input	Natural resonance c/s	Frequency range c/s	Characteristic sensitivity	Sort of the magnet, material	Flux T	Weight g
75X50	5,5	ARV 081	28	2	3	—	1000—16000	90	PERMAG-A	0.75	0.18
75X50	8	ARV 088	28	2	3	—	1000—16000	89	PERMAG-A	0.75	0.18
75X50	15	ARV 160	29	5	7	—	2500—20000	92	D270	1.2	0.30
d 90	4	ARV 161	30	5	7	—	1500—20000	92	D270	1.2	0.34
d 90	8	ARV 168	30	5	7	—	1500—20000	92	D270	1.2	0.34
d 100	4	ARV 261	31	1.50	4	—	6000—16000	97	D270	1.2	0.38
	8	ARV 265	31	1.50	4	—	6000—16000	96	D270	1.2	0.38
	0,6	ART 481	32	5	7	—	3000—18000	93	PERMAG-A	1.3	1.0
	8	ART 981	33		45	—	300—3500	111	PERMAG-A	1.3	1.6

## MIDRANGE

Dimensions	Imp ohms	Commercial denomination		W	W	Natural resonance c/s	Frequency range c/s	dB	Sort of the magnet, material	T	kg
0 203	15	ARO 664	27	5	10	60—95	100—6000	90	D270	1.1	0.34

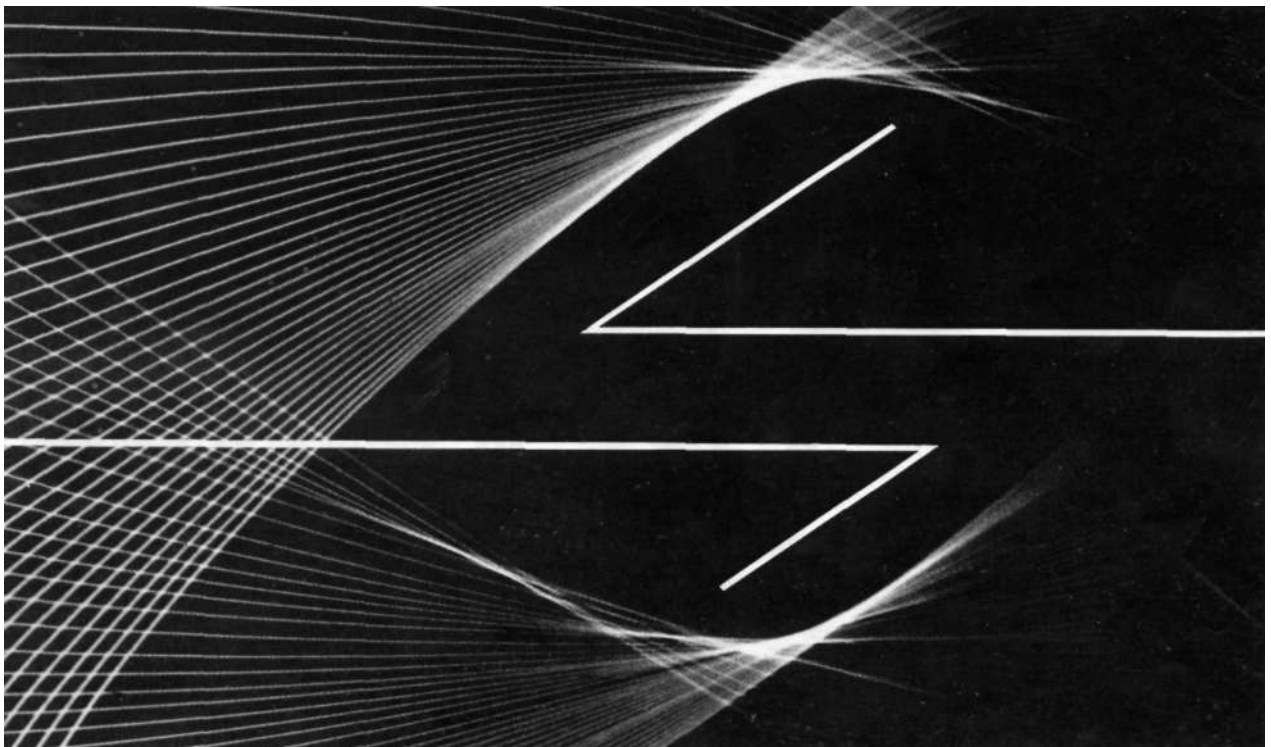
# WOOFERS

Dimensions	Impedance	Commercial denomination	Dimensional drawing	W Power input maxim.	Peak value of max. power input	Natural resonance c/s	Frequency range c/s	Characteristic sensitivity	Sort of the magnet, material	FLUX density	Weight £
d 340	4	ARO 835	34	10	15	30	30—4000	96	PERMAG-A	1.0	5.15
d 340	8	ARO 838	34	10	15	30	30—4000	96	PERMAG-A	1.0	5.15
d 390	15	ARO 932	35	15	30	24	24—4000	98	PERMAG-A	1.35	10.20
d 390	30	ARO 942	35	15	30	24	24—4000	98	PERMAG-A	1.35	10.20

# HIGH COMPLIANCE WOOFERS

Dimensions	Impedance	Commercial denomination	Dimensional drawing	W Power input maxim.	W Peak value of max. power input	Natural resonance c/s	Frequency range c/s	dB Characteristic sensitivity	Sort of the magnet, material	T FLUX density	kg Weight
100	4 8 16	ARZ 369 ARZ 368 ARZ 367	36 36 36	3	10	45	45—5000	85	D270	1.0	0.66
165	4 8	ARN 567 ARN 568	37 37	10	15	28	28—5000	87	D330	1.0	1.—
200	4 8	ARN 664 ARN 668	38 38	15	20	25	25—3500	90	D330	1.0	1.1
9-270	15	ARN 730 ARN 738	39 39	20	30	22	22—2000	90	PERMAG-A	1.0	3.5
390	15 8	ARN 930 ARN 938	40 40	25	50	18	18—1000	87	PERMAG-A	1.25	10.—

Note: The peak value of the maxim, power input is measured in an enclosed baffle





1



2



3

**TESLA**

**LOUDSPEAKERS FOR POCKET AND  
HANDBAG RECEIVERS. FOR RECORD  
PLAYERS AND TAPE RECORDERS**

**ARZ 383**

**ARZ 341 ARZ 572**

5



6



7



4



**ARZ 689 ARZ 662**

**ARZ 388**

**ARZ 488**

8



9



10



11



**ARZ 389**



12



13



14



15



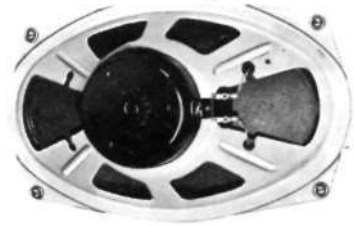
16



17



18



19

## LOUDSPEAKERS FOR UNIVERSAL APPLICATION



20



22



23



21

24



25

26



27



---

**34**



**35**



---

**TWEETERS**

**29**



**30**



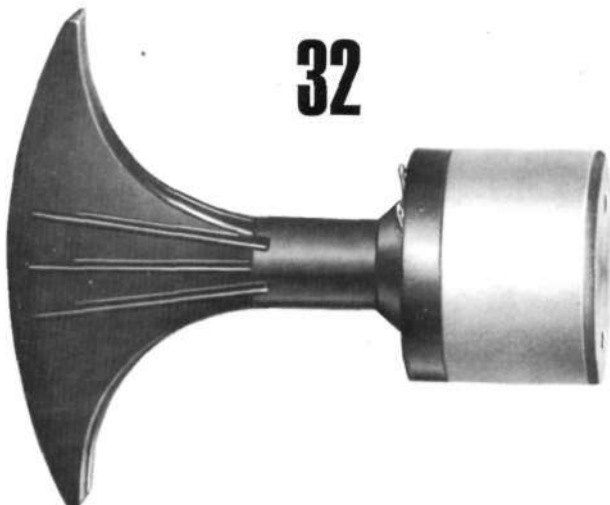
**31**



**28**



**32**



**33**



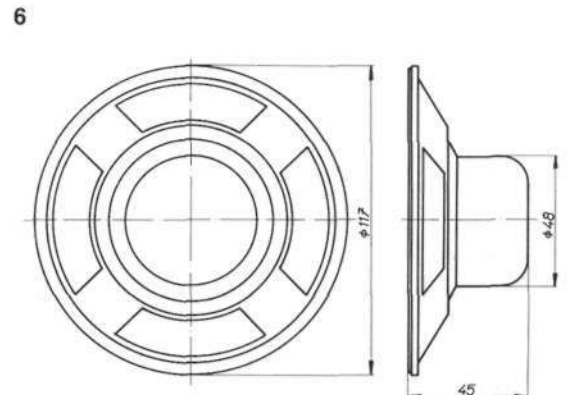
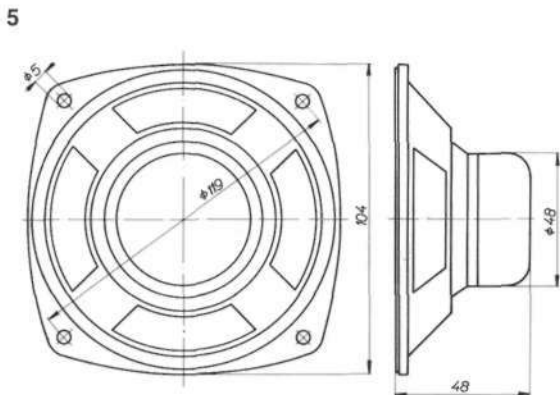
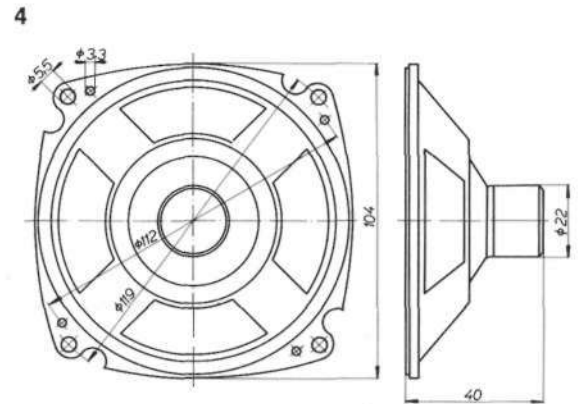
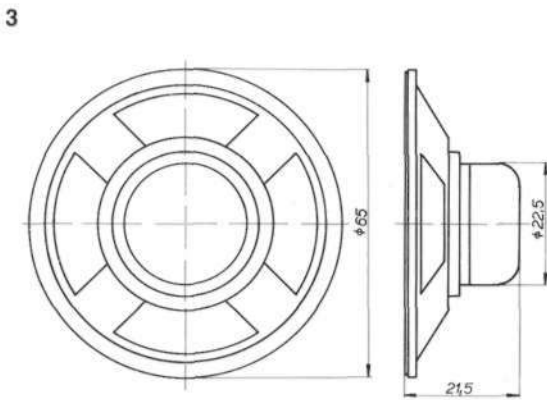
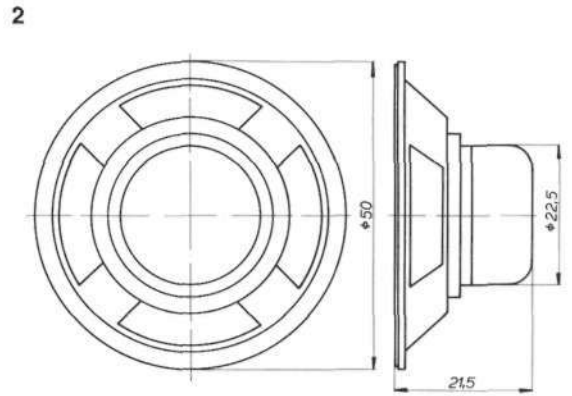
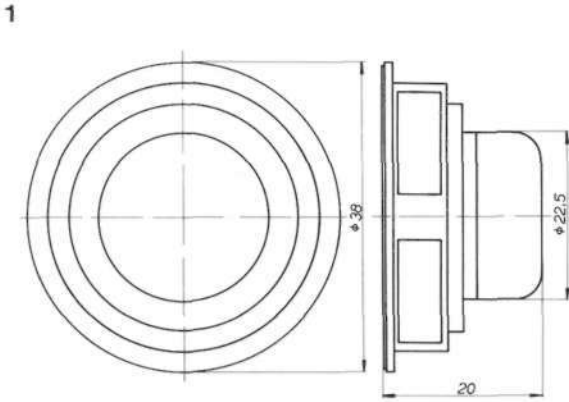




**EXPORT  
IMPORT  
KOVO**  
PRAHA  
CZECHOSLOVAKIA

The dimensional drawings are marked with appropriate figures which are indicated also on the individual illustrations. This marking is specified accordingly in the Tables of Technical Values, in the column "Dimensional Drawing".

The dimensions are specified in mm.





36



37



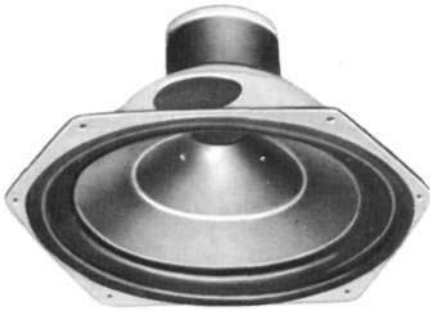
---

## HIGH COMPLIANCE WOOFERS

---



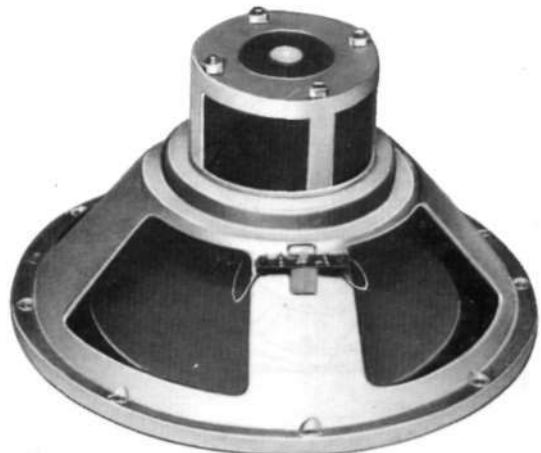
38



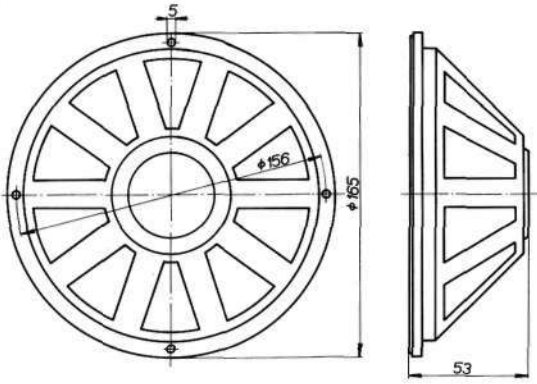
39



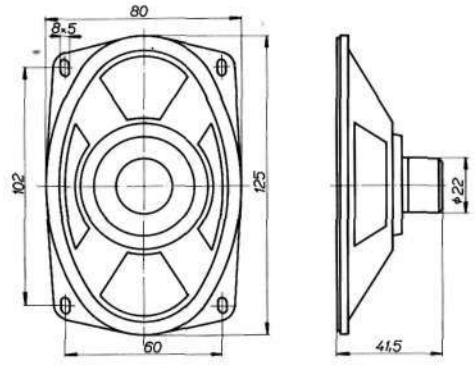
40



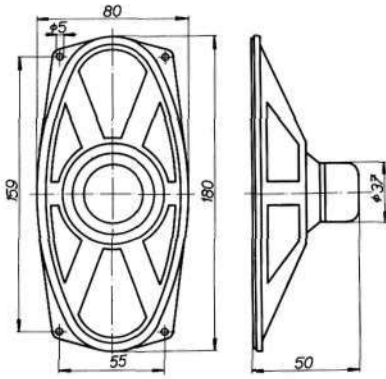
7



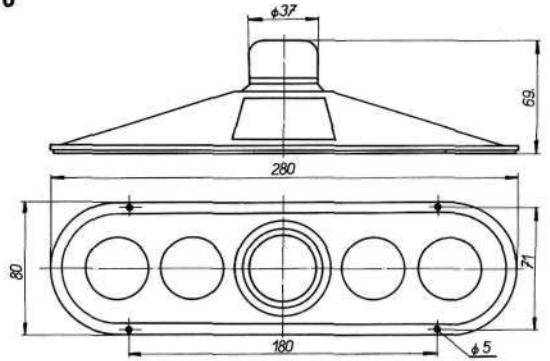
8



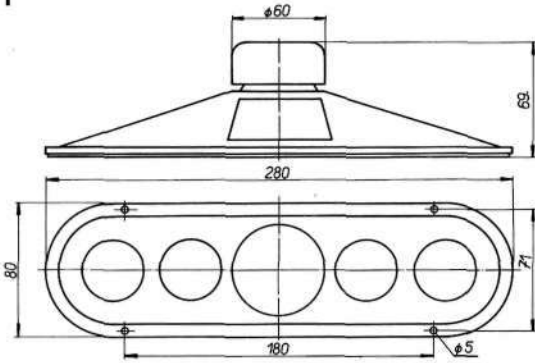
9



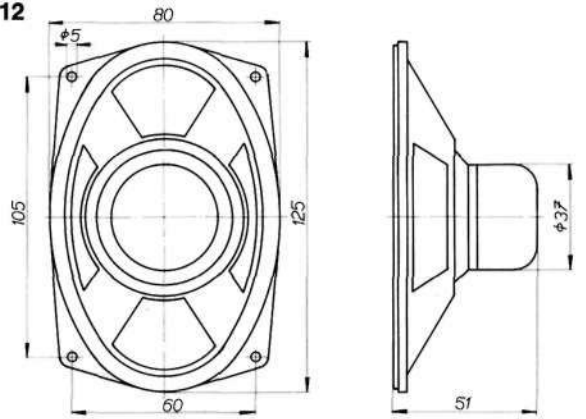
10



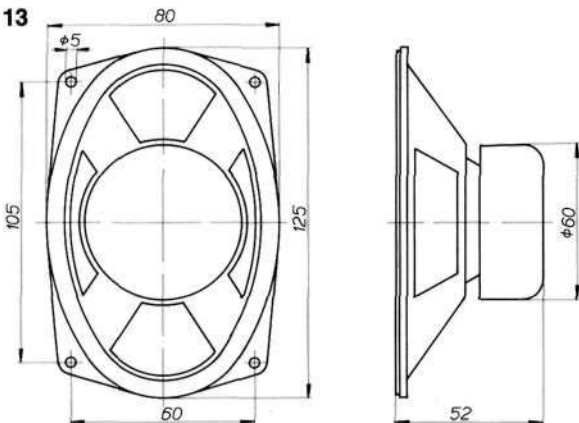
11



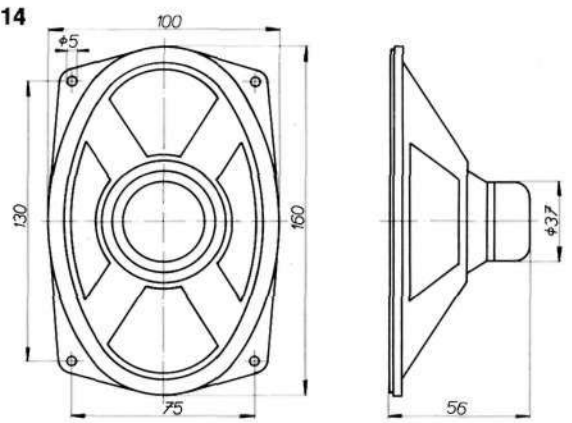
12

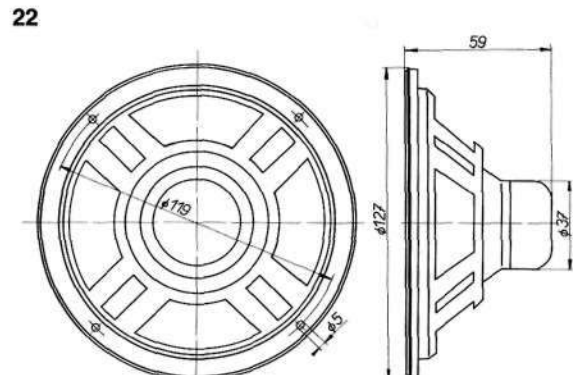
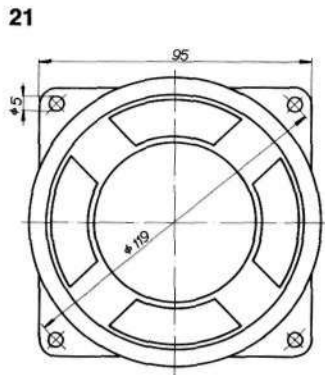
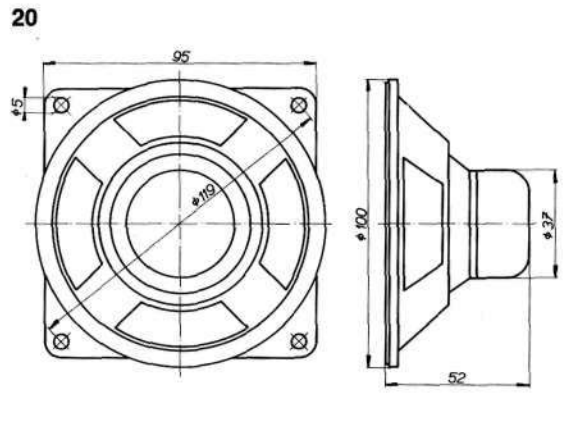
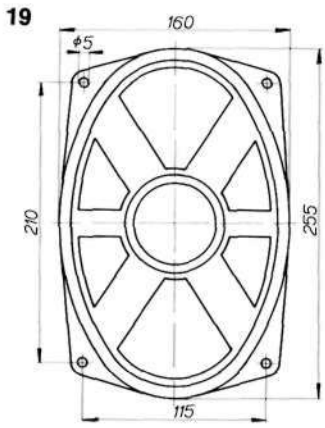
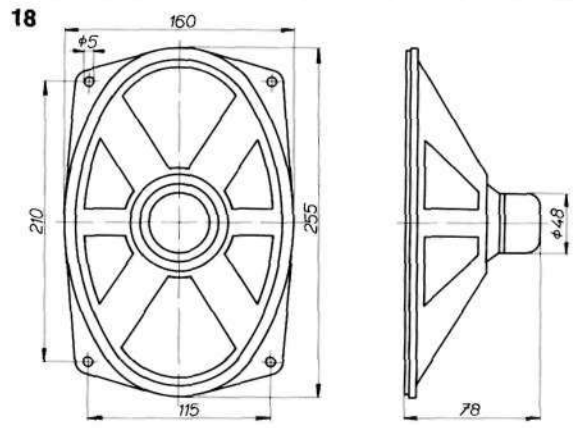
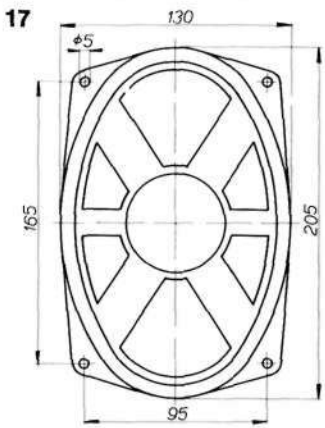
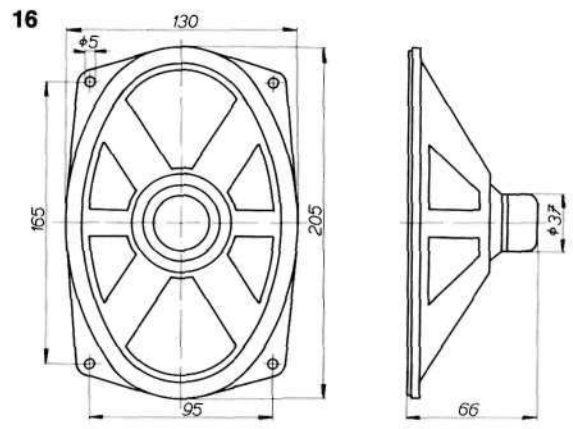
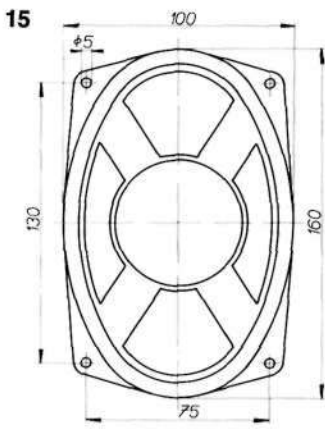


13

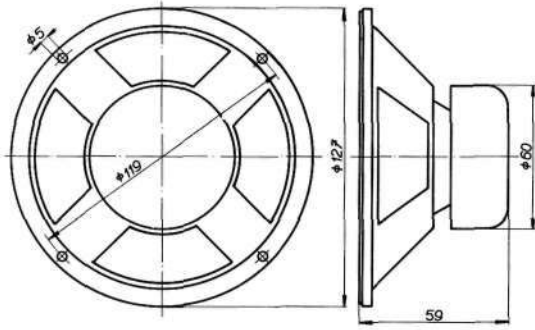


14

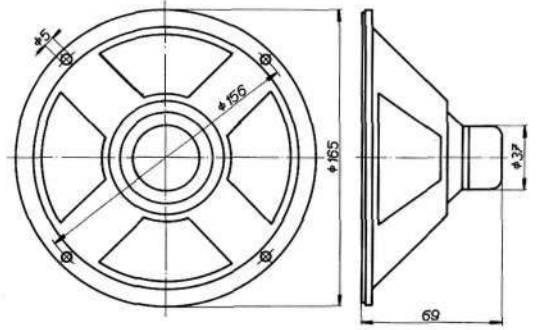




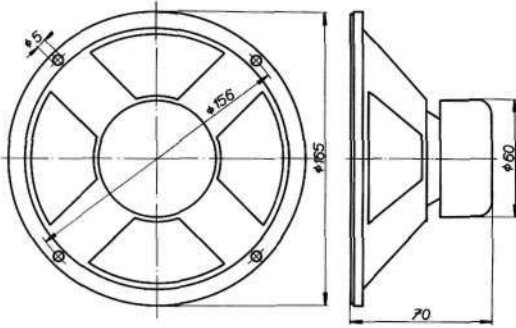
23



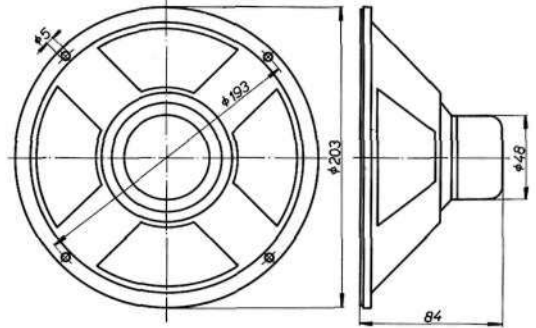
24



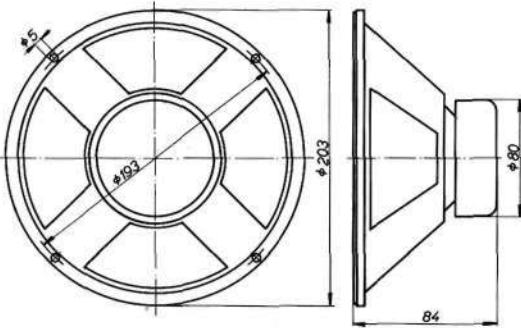
25



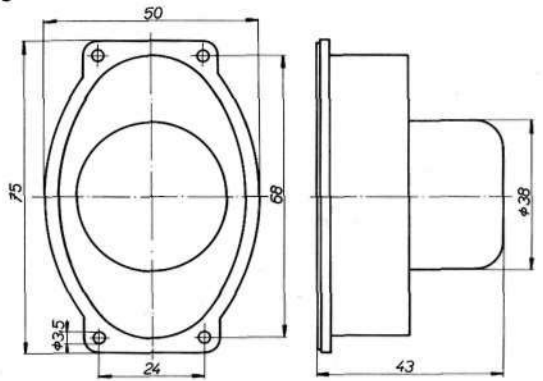
26



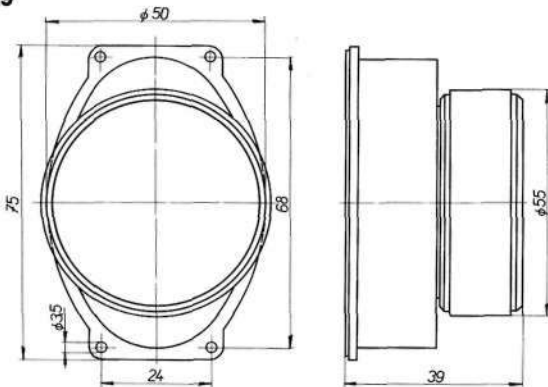
27



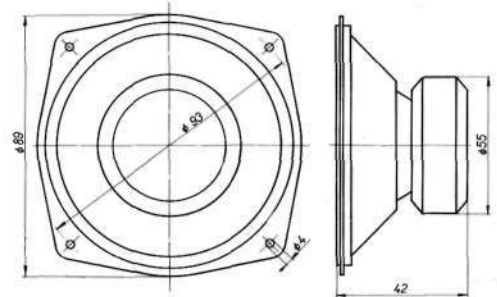
28



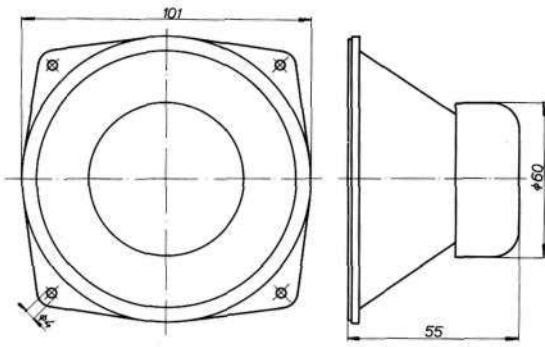
29



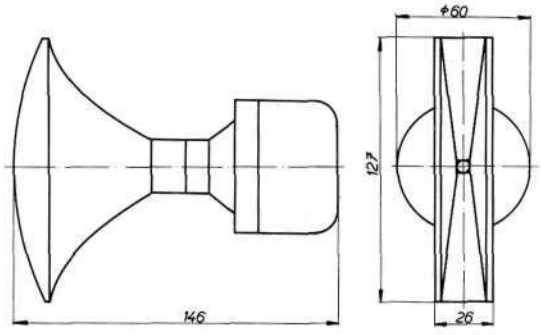
30



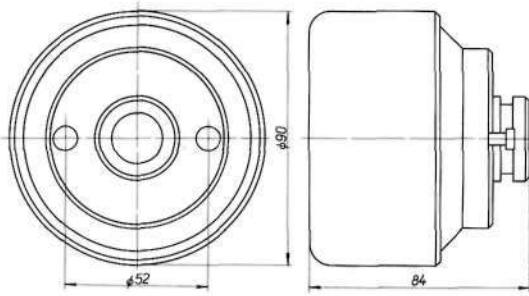
31



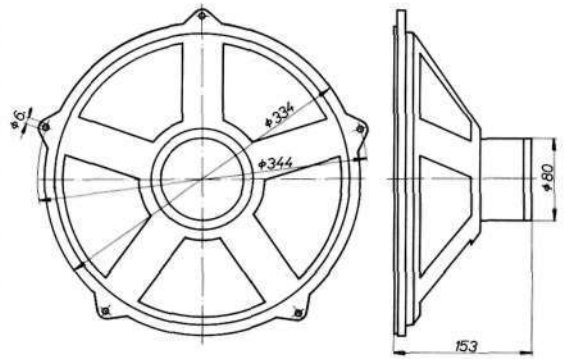
32



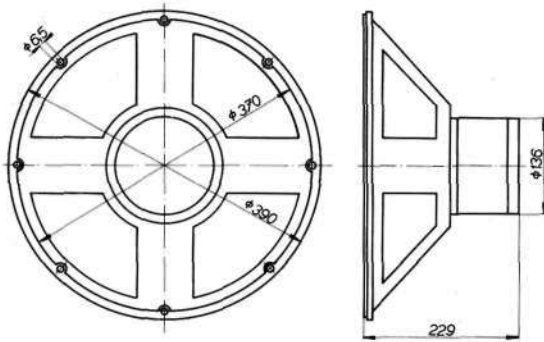
33



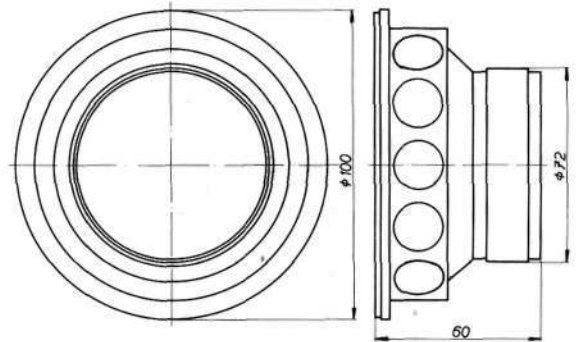
34



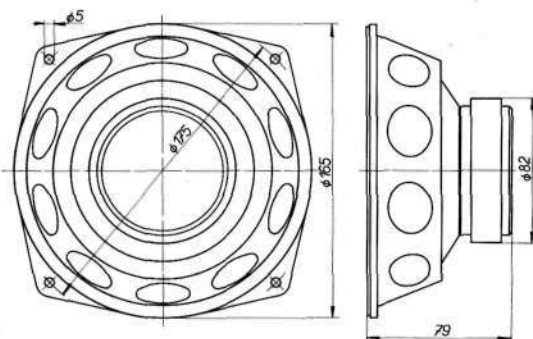
35



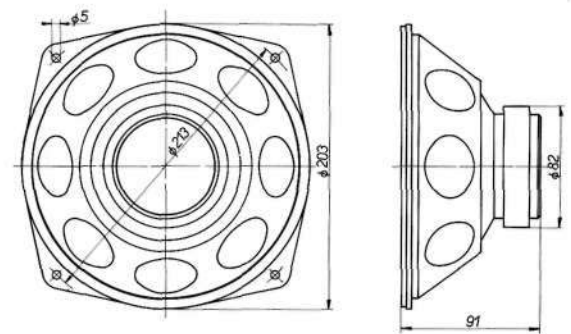
36



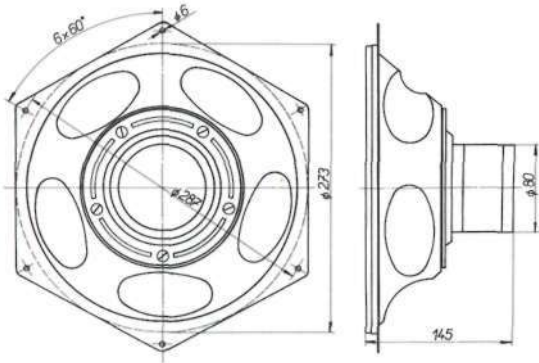
37



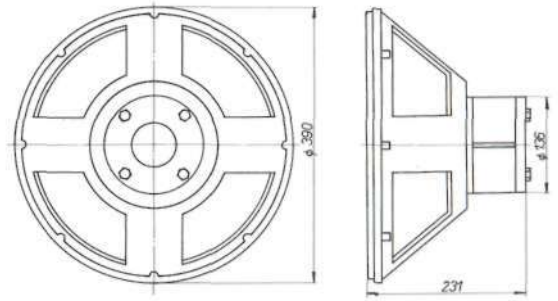
38



39



40



## LOUDSPEAKER SYSTEMS

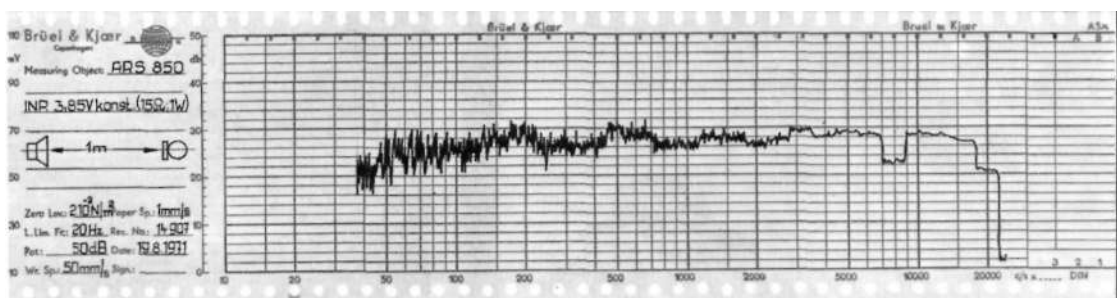
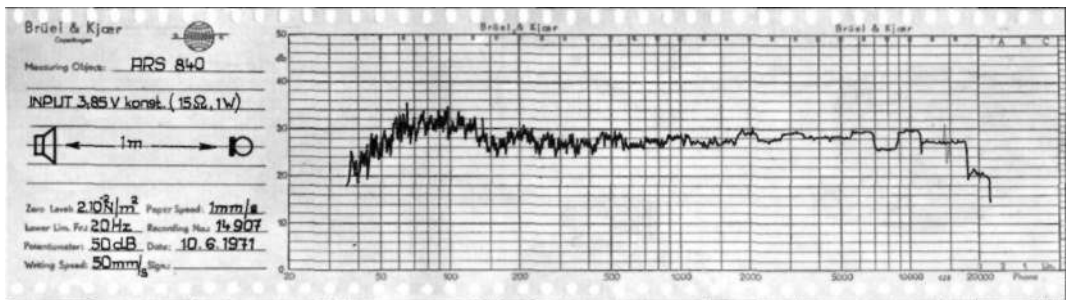
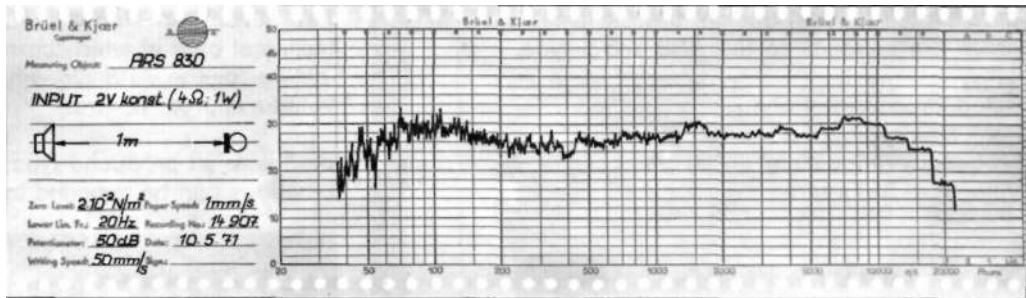
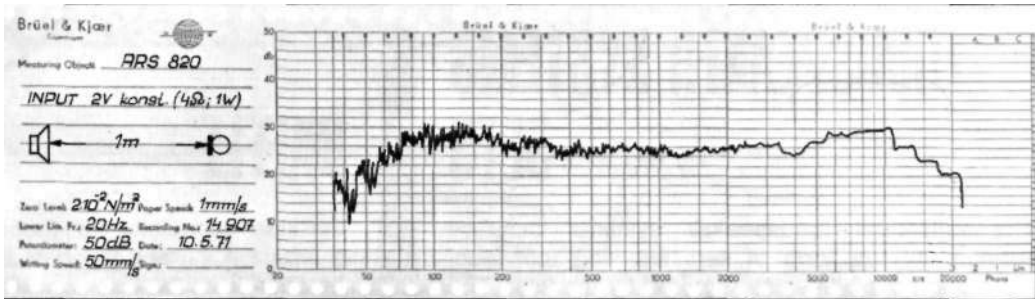
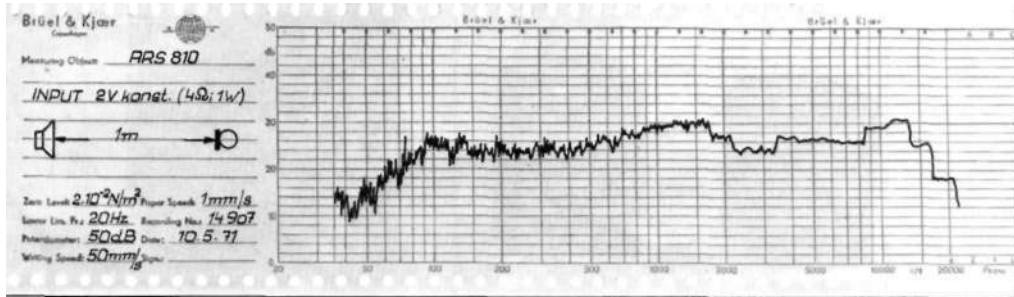
For those interested in the Hi-Fi reproduction of music and speech, TESLA has prepared a complete line of new loudspeaker systems. When evolving the new types, careful attention was paid to the objective and subjective valuation of their performance. The latest knowledge and experience amassed during their practical use in normal homes have been utilized in pursuance of the aim to satisfy the most fastidious demands of all those who require high-quality Hi-Fi reproduction of music and speech, offering a deep aesthetic impression.

The new types of the produced loudspeaker systems have an impedance of 4 ohms and 8 ohms, the larger types (40 I and 100 I) 15 ohms. In comparison with the older types the load capacity of the new loudspeaker systems has been substantially increased and the frequency range has been widened. Their external appearance and surface finish satisfy the demands of today's fashion — brocades of artificial (rayon) fabrics and new modes of veneering have been used.



# EXAMPLES OF FREQUENCY RESPONSE

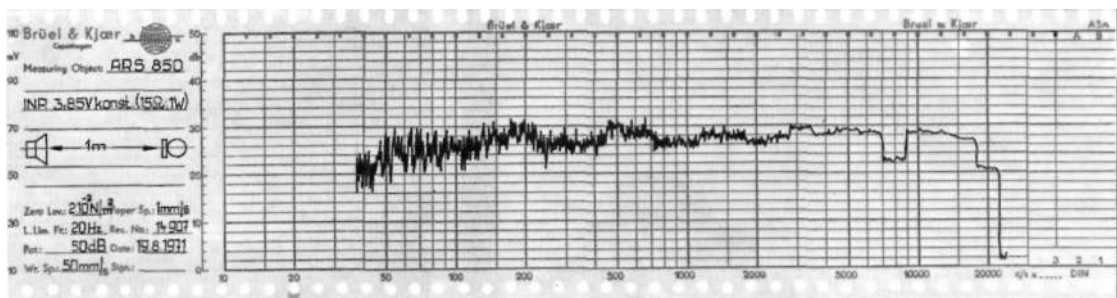
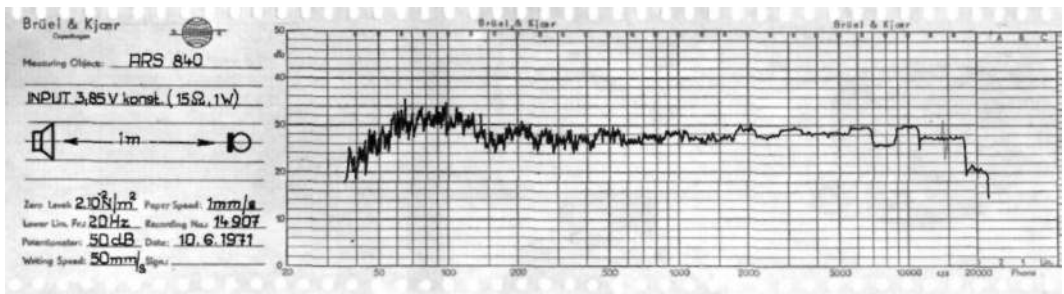
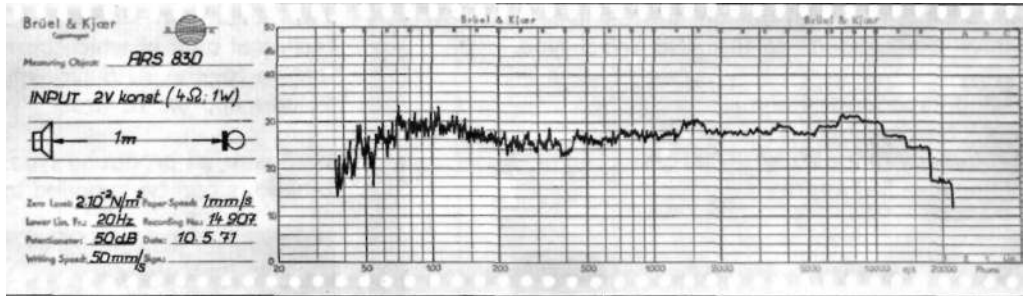
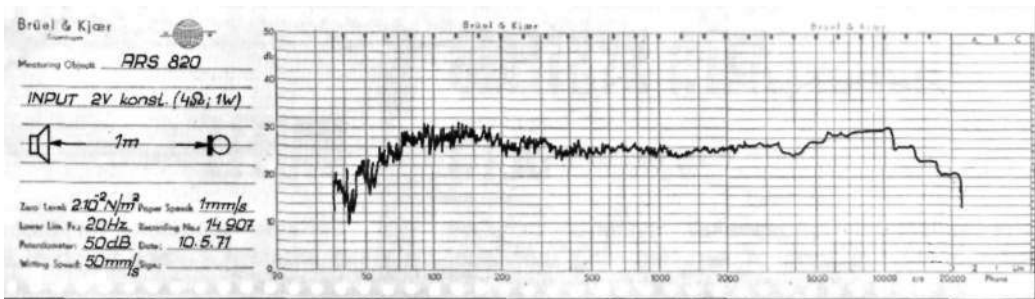
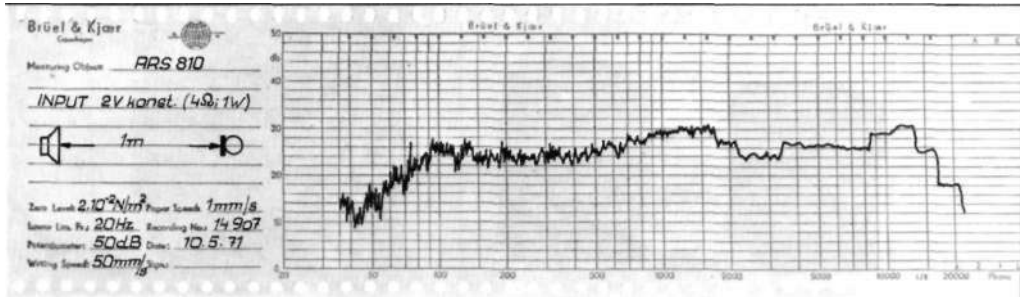
The specified types ARS810, ARS 820, ARS 830 and ARS 840 are measured in a half-enclosed space (this corresponds to the conditions of accommodation on shelves). The ARS 850 type has been measured in the space.





# EXAMPLES OF FREQUENCY RESPONSE

The specified types ARS810, ARS 820, ARS 830 and ARS 840 are measured in a half-enclosed space (this corresponds to the conditions of accommodation on shelves). The ARS 850 type has been measured in the space.



Type	Impedance ohms	Peak musical input power W	Frequency range c/s	Internal volume litres	Dimensions of the systems hXwXd mm	Weight kg
ARS810	4	20	50—20000	3	240X150X153	2,6
ARS811	8	20	50—20000	3	240X150X153	2,6
ARS 820	4	30	45—20000	10	330X205X217	4,5
ARS 821	8	30	45—20000	10	330X205X217	4,5
ARS 830	4	50	40—20000	20	495X285X252	8
ARS 840	15	75	35—20000	40	630X360X315	18
ARS 850	15	100	20—20000	100	960X560X368	46

Type	Woofer		Type and number of loud-speakers	Midrange		Tweeter		Crossover frequency of directional filter c/s
	Dimensions mm	Resonance c/s		Dimensions mm	Type and number of loud-speakers	Dimensions mm	Type and number of loud-speakers	
ARS810	d 100	45	ARZ 369 1X	—	—	75X50	ARV 081 1X	4000
ARS811	0 100	45	ARZ 368 1X	—	—	75X50	ARV 088 1X	4000
ARS 820	0 165	28	ARN 567 1X	—	—	0 89	ARV 161 1X	2000
ARS 821	0 165	28	ARN 568 1X	—	—	0 89	ARV 168 1X	2000
ARS 830	0 203	25	ARN 664	—	—	0 89	ARV 161 1X	2000
ARS 840	0 273	22	ARN 730 1X	0 203	ARO 664 1X	75X50	ARV 160 1X	650 4000
ARS 850	0 390	18	ARN 930 1X	0 203	ARO 664 1X	75X50	ARV 160 1X	650 4000

Type	Impedance ohms	Peak musical input power W	Frequency range c/s	Internal volume litres	Dimensions of the systems hXwXd mm	Weight kg
ARS810	4	20	50—20000	3	240X150X153	2,6
ARS811	8	20	50—20000	3	240X150X153	2,6
ARS 820	4	30	45—20000	10	330X205X217	4,5
ARS 821	8	30	45—20000	10	330X205X217	4,5
ARS 830	4	50	40—20000	20	495X285X252	8
ARS 840	15	75	35—20000	40	630X360X315	18
ARS 850	15	100	20—20000	100	960X560X368	46

Type	Woofer		Type and number of loud-speakers	Midrange		Tweeter		Crossover frequency of directional filter c/s
	Dimensions mm	Resonance c/s		Dimensions mm	Type and number of loud-speakers	Dimensions mm	Type and number of loud-speakers	
ARS810	d 100	45	ARZ 369 1X	—	—	75X50	ARV 081 1X	4000
ARS811	0 100	45	ARZ 368 1X	—	—	75X50	ARV 088 1X	4000
ARS 820	0 165	28	ARN 567 1X	—	—	0 89	ARV 161 1X	2000
ARS 821	0 165	28	ARN 568 1X	—	—	0 89	ARV 168 1X	2000
ARS 830	0 203	25	ARN 664	—	—	0 89	ARV 161 1X	2000
ARS 840	0 273	22	ARN 730 1X	0 203	ARO 664 1X	75X50	ARV 160 1X	650 4000
ARS 850	0 390	18	ARN 930 1X	0 203	ARO 664 1X	75X50	ARV 160 1X	650 4000

# ARS 754

A loudspeaker system comprising 4 loudspeakers 255X160 mm, with hinged rear wall and a space for 20 m of connecting cable. Wooden design, veneered surface. Max. power input 20 W, max. load capacity 25 W, rated impedance 8 ohms, frequency range 70 to 12,000 c/s, characteristic sensitivity 95 dB; dimensions 420X620X200 mm.

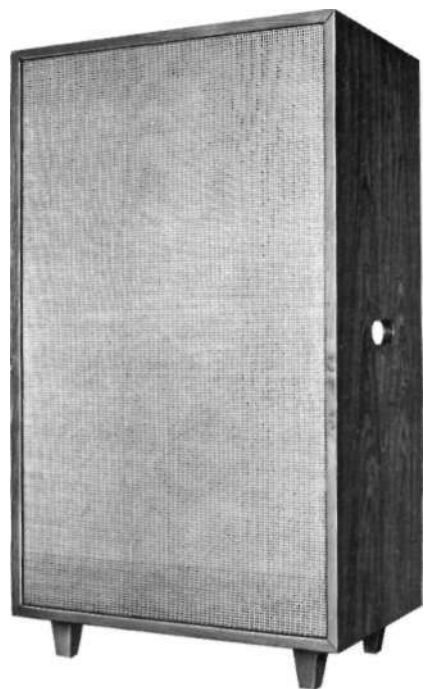
A protective cover made of leatherette is supplied with the loudspeaker combination. The latter is easily transportable and is distinguished by high efficiency, this being found to be of special advantage for small musical groups.



# ARS 704

This is a loudspeaker system especially suitable for use in rooms with increased noise level (e. g. dancing halls, etc.). The cabinet is made of wood, the surface is veneered; inside the cabinet there are six loudspeakers of 200 mm in diameter, with increased loading capacity and two tweeters of 100 mm in diameter. Maximum power input is 30 W, the limit loading capacity 50 W. Connection to an 100 V distribution network or to a rated impedance of 15 ohms; frequency range 70 to 15,000 c/s, characteristic sensitivity 98 dB, dimensions 594X1074X400 mm. Weight approx. 30 kg.

## LOUDSPEAKER SYSTEMS FOR MUSICAL ENSEMBLES



# ARS 641

An aural monitor loudspeaker designated as "R 12" by the Czechoslovak Broadcast Company; this aural monitoring cabinet is intended for broadcast control rooms and studios for recording where high demands are imposed on the reproduction quality. The loudspeaker system is provided with an enclosed transistor amplifier with corrections, volume control and thyristor protection. The bass-tone part is formed by a special woofer of 390 mm in diameter. In the radiation axis is located a tweeter of 75X50 mm in size. The Mid-tone system is represented by a specially adapted loudspeaker of 200 mm in diameter. The cabinet is made of wood, its surface is veneered; the adjustable stand is of metal.

Peak Musical Power	100 watts
Frequency Range	20—20,000 c/s
Output Power	50 watts rms
Line Input	1.55V/4kOhms
Tone Corrections	—6; —3; 0; +3; +6 dB/40 c/s
Dimensions:	
High	1100 mm, Wide 564 mm, Depth 360 mm
Weight	65 kg



## AURAL MONITOR LOUDSPEAKERS FOR BROADCAST STUDIOS

# ARS 651

The ARS 651 is used as an aural monitor in broadcast and TV service, especially in P. A. (public address) and OB (outdoor broadcasting) vans and at smaller workplaces. The built-in amplifier of 30 W is equipped with controls and corrections.

Special woofer of 200 mm in diameter;  
Mid-tone loudspeaker of 200 mm in diameter; Tweeter 50 X 75 mm.

The cabinet is made of wood, its surface is veneered.

Peak Musical Power	40 watts
Frequency Range	45—20,000 c/s
Output Power	30 watts rms
Line Input	1.55 V/4 kOhms
Tone Corrections	—6; —3; 0; +3; +6 dB/40 c/s
Dimensions:	
High	350 mm, Wide 305 mm, Depth 310 mm
Weight	14 kg

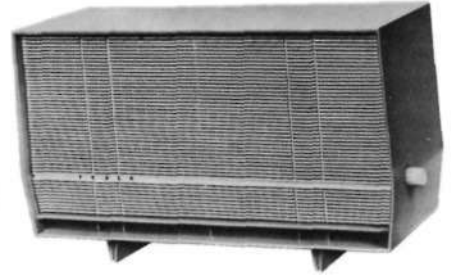
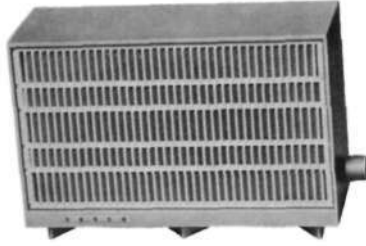
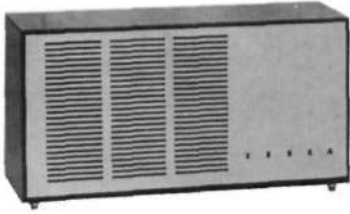


# ADDITIONAL LOUDSPEAKER BOXES

ARS 236

ARS 243

ARS 292

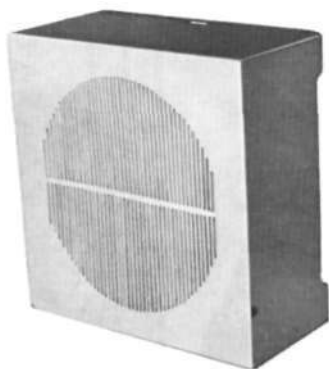


## Table-Type Loudspeaker Boxes

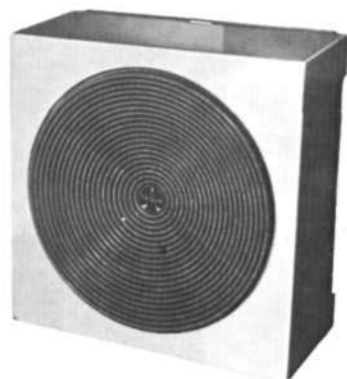
Type	Maxim. power input W	Rated impedance ohms	Rated input voltage V	Frequency range $\pm 7$ dB c/s	Characteristic sensitivity dB	Dimensions height x width x depth mm	Weight kg	Application and Mode of Control
ARS 236	1	—	100	180—15000	88	127X235X80	0.75	For connection to a 100 V distribution network; volume control facility.
ARS243	1	—	100	200—15000	87	175X260X100	1.4	
ARS 294	1	—	100	140—12000	92	263X448X185	3.5	
ARS 237	0.3	—	30	180—15000	88	127X243X80	0.83	For connection to a 30 V distribution system of the wire broadcasting.  Volume control in steps.
ARS 238	0.3	—	30	180—15000	88	127X243X80	0.83	
ARS 241	0.3	—	30	200—15000	86	175X260X100	1.40	
ARS 247	0.3	—	30	200—15000	86	175X278X100	1.40	
ARS 292	0.3	—	30	140—12000	92	265X470X185	3.5	
ARS 297	0.3	—	30	140—12000	92	265X470X185	3.5	
ARS 239	0.7	4	—	180—15000	89	127X235X80	0.56	
ARS 245	1	4	—	200—15000	88	175X278X100	1.1	For connection to low-ohm outputs of amplifiers. No volume control provided.
ARS 296	5	4	—	140—12000	93	265X470X185	3.3	
ARS 713	3	4	—	140—12000	92	258X190X168	2	
ARS 715	5	4	—	80—15000	92	245X150X240	1.5	

# WALL-SUSPENSION BOXES AND COLUMNS FOR PROVIDING INTERIORS WITH SOUND

Wall-suspension boxes of plastic material for a 100 V distribution network — without volume control facility. Dimensions and technical data of them all are analogical. The maximum power input 6 W, adjustable to 3 W and 1.5 W. Frequency range: 200 to 10,000 c/s; Characteristic sensitivity — 95 dB. Dimensions 230 X 230 X 115 mm.



ARS 275

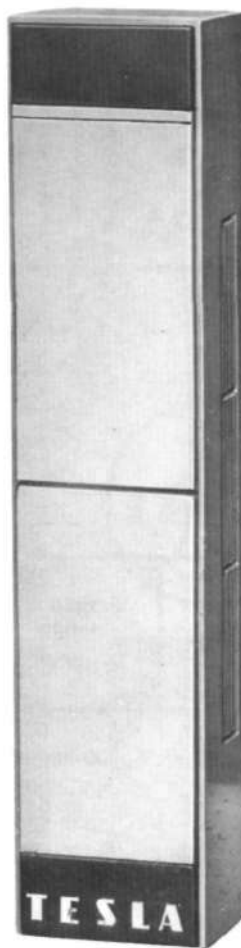


ARS 276

## ARS 771

Loudspeaker column for a 100 V distribution system; max. power input 15 W, frequency range 150 c/s to 8,000 c/s, characteristic sensitivity 95 dB. Dimensions 250X1200X170 mm. The column is made of wood; matt surface finish.

ARS 771



ARS 770

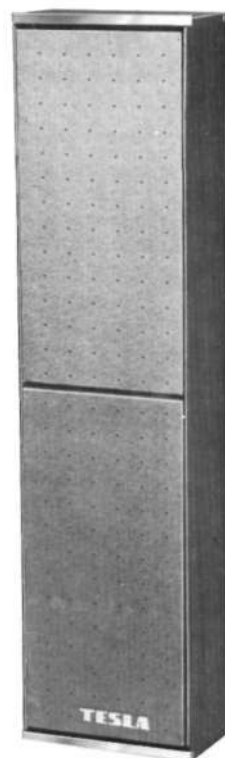
## ARS 770

Loudspeaker column, 10 W, 4 ohms; max. power input 10 W, frequency range 180 to 10,000 c/s, characteristic sensitivity 95 dB.

Dimensions 200 X 800 X 115 mm

Made of veneered wood.

A pair of these columns, housed in one transport case, is supplied under the denomination ARS 780.



# LOUDSPEAKERS

## FOR PROVIDING FREE AREAS WITH SOUND



**ARS 403**

100 V, 6 W



**ARS 432**

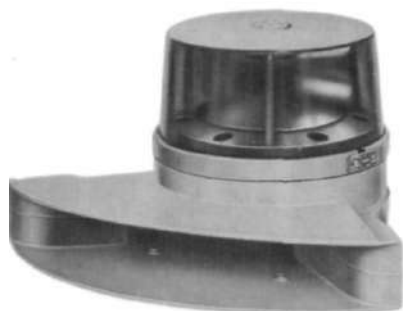
100 V, 12,5 W

Type	Max. power input W	Connect, voltage V	Frequency range c/s	Characteristic sensitivity dB	Dimensions mm	Weight kg
ARS 403	6/3/1.5	100	200—10000	90	Ø 430X453	4
ARS 432	12.5/10/8	100	150— 6000	94	Ø 635X672	11.5
ARS 433	12.5/10/8	30	150— 6000	94	d 635X672	11.5
ARS 453	25/15/10	100	350— 3500	106	280X500X410	6.7
ARS 456	15	100	350— 3500	102	280X500X410	5.5
ARS 560 A	90	4 Ohm	200— 5000	101	452X508X275	10
ART 300	300	200	300— 3500	123	d 925X878	30

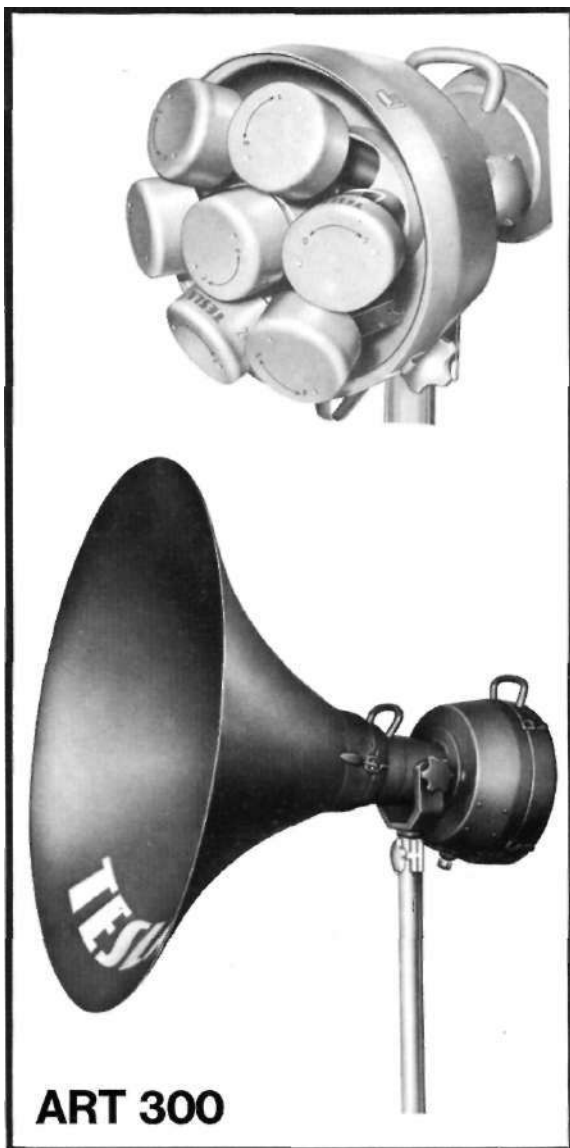




**ARS 453**  
**ARS 456**



**ARS 560 A**



**ART 300**



Example of fixing the  
ARS 560 A loudspeaker  
onto the means of trans-  
port

For usage, see  
AZD 500, page 36.



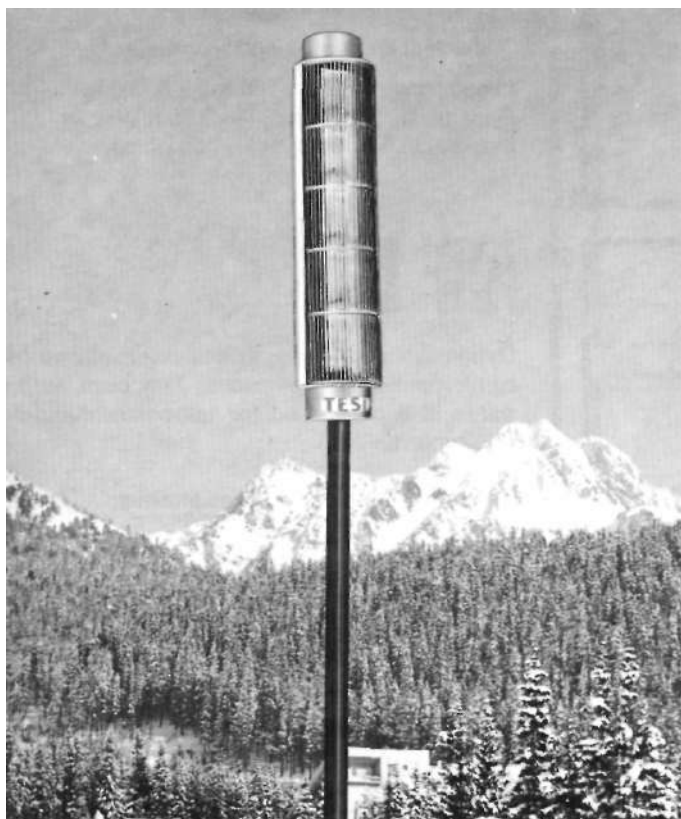


# ARS 513

## ACOUSTIC DIPOLE

Employed for quality reproduction in places with the risk of sound reflection, such as squares, stadiums, etc., where decentralized sound-providing facility is used to advantage. It is a system of two enclosed disk-type baffles with a kidney-shaped radiation pattern, located one above the other and connected in phase opposition (antiphase connection); in this way, a substantial suppression of the sound intensity, especially of bass-tones, at a greater distance from the axis of the system is attained. However, in the vicinity of the system axis, expressive radiation of even low frequencies takes place and high-quality sound-conditions are attained. The construction of dipoles is robust enough to withstand weather influences (rain and snow). J 10 masts, according to the Czechoslovak State Standard CSN 348 342 for street lamp-posts, are used.

Connection voltage of the distribut. network — 100 V, max. power input 2X32 W (switching-over possibility: 2X16W, 2X8 W), sensitivity at 100 V, 2X32 W — at a distance of 10 m . . . 80 dB, 20 m . . . 70 dB, 50 m . . . 60 dB.



# ARS 503

## LOUDSPEAKER COLUMN 25 W. 100 V

Used to provide open areas with sound, where use can be made of the directional radiation effect. It can also be applied for providing enclosed spaces with long-lasting reverberation with sound (factory halls, sport halls, etc.).

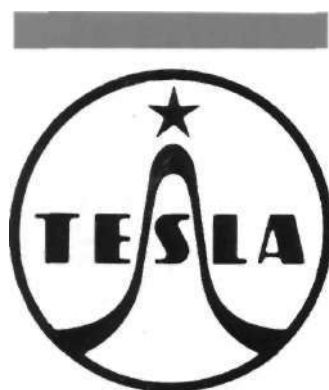
The positive features of the ARS 503 loudspeaker column: clear articulation of the spoken word and good transmission of sound which can be still increased by assembling two columns one above the other. Wall-mounting is also possible; with the aid of a suitable mount it can also be fixed onto masts.

### Technical Data

Weather- (rain and snow) proof, connection voltage of the distributing network — 100 V, maxim, power input 25 W, characteristic sensitivity 95 dB, frequency range 150 to 8,000 c/s.



Example of fixing two ARS 503 loudspeakers columns onto a street lamp-post.



# ARF 210

Stereophonic dynamic headphones ensuring high fidelity reproduction even under restricted conditions of such rooms where perfect acoustic insulation is impossible. Special pads render the wearing of headphones agreeable. Frequency range 50 to 15,000 c/s; sensitivity at 1 higher than 105dB/1mVA, impedance 2 X 75 ohms.

# ARF 260, ARF 262

Headphone set (mono) with a cardioid microphone. Used in tuition laboratories, in connection with headphone-type communication appliances, radio links, etc. The ARF 260 model is provided with separate connectors for the headphones and microphone, the ARF 262 type is equipped with a common fiveplug connector for the headphones and microphone.

### Technical Data of the Headphones:

Frequency range 50 to 15,000 c/s  
Sensitivity (at 1 kc/s) — higher than 105 dB/1 mVA  
Impedance —150 ohms.

### Technical Data of the Microphone:

Frequency range — 100 to 12,000 c/s  
Sensitivity (at 1 kc/s) — 0.55 mV/sq.m  
Internal el. impedance — 200 ohms

# ARF 160

Dynamic headphone with a microphone for trunk exchange operators. The cord terminates in a plug used for telecommunication equipment.

### Technical Data of the Headphones:

Frequency range 200 to 5,000 c/s  
Sensitivity (at 1 kc/s) higher than 105 dB/1 mVA  
Impedance 75 ohms.

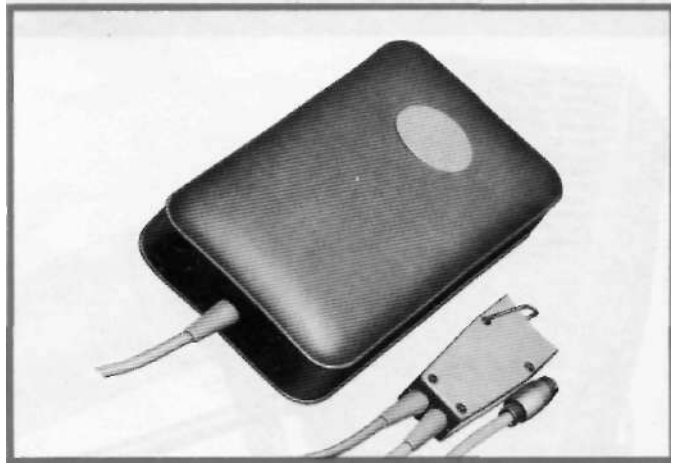
### Technical Data of the Microphone:

Frequency range 100 to 12,000 c/s  
Sensitivity (at 1 kc/s) — 0,55 mV/N/sq.m  
Internal el. impedance — 200 ohms



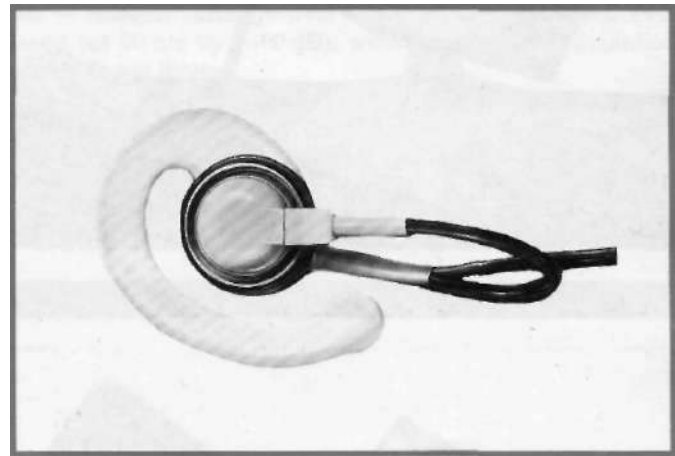
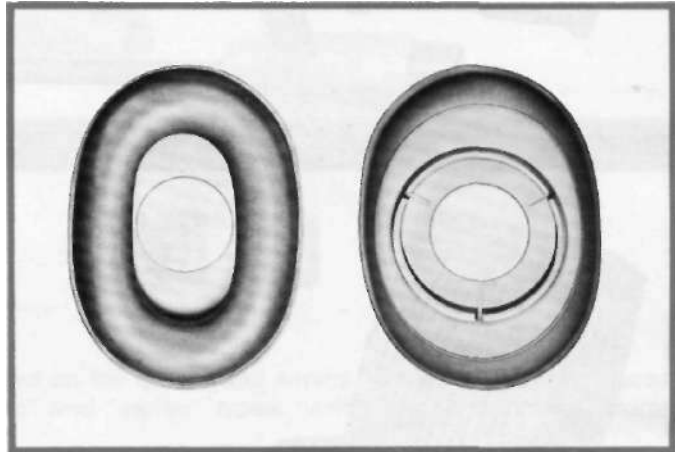
# AYZ141

Cushion (pillow) with a built-in loudspeaker. The design shown in the illustration is used for communication purposes in health institutes. The push-button serves for signaling. True-to-life speech reproduction. High sensitivity with sound recording.



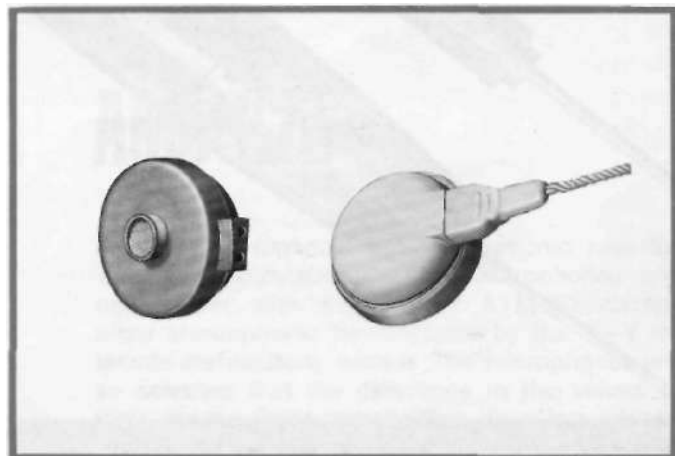
# AYF 210

Earpieces provided with a soft lining, washable, used in connection with dynamic headphones of the aforementioned types.



# MINIATURE EARPHONES

Used in connection with listening devices or for aural monitoring purposes. The earphones are provided either with an ear hanger or with an ear insert.





## AMD 105 AMD 107

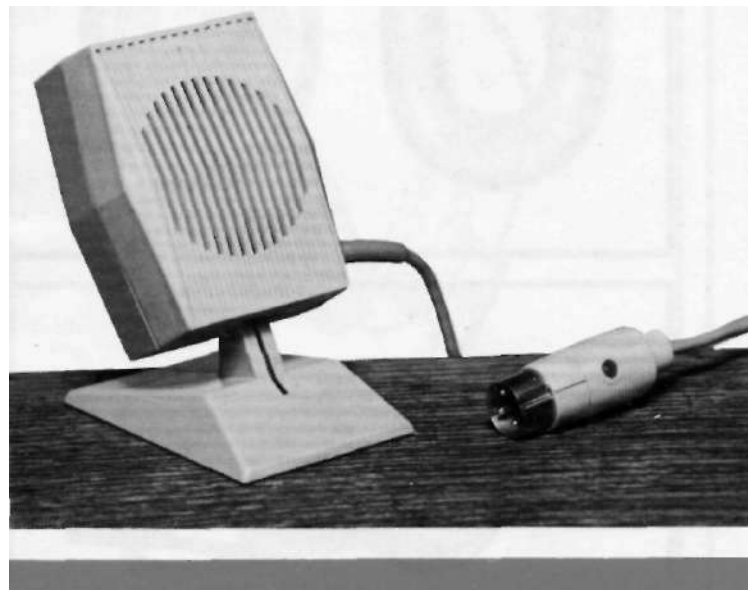
Electrodynamic microphone with a folding stand. Enclosed ratio transformer 200 ohms/100 kohms.

Difference in the length of the cord:  
the cord for AMD 105 is 2 m long  
the cord for AMD 107 is 5 m long

Average sensitivity 40 mV/N/sq.m

Frequency range — 100 to 12,000 c/s

Directional characteristic (directivity pattern): non-directional.



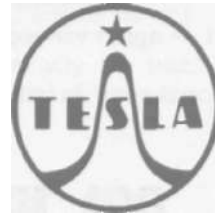
## AMD 108

Electrodynamic microphone with a stand, without the enclosed transformer. Suitable for use in connection with instruments having a low-impedance input.

Average sensitivity 1.5 mV/N/sq.m

Frequency range: 100 to 12,000 c/s

Directional characteristic (directivity pattern):  
non-directional



## AMD 200 AMD 202

Electrodynamic cardioid microphones. The AMD 200 model is provided with an enclosed transformer, the AMD 202 type has no built-in transformer. Average sensitivity in the band of 500 to 12,000 c/s:  
Type AMD 200 — min. 2.5 mV/N/sq.m  
Type AMD 202 — min. 1 mV/N/sq.m  
Frequency range — 80 to 12,000 c/s  
Directional characteristic: cardioid  
Front-to-back ratio: 12 dB



**Electrodynamic microphone, fixed into an AYM 113 table stand**

## AMD 210

The microphone satisfies exacting demands imposed on the quality and serves as a supplementary accessory item to tape recorders and amplifiers of "mono" and "stereo" types, having a load impedance corresponding to the amplifier medium-impedance input.

The microphone is provided with an enclosed "music — speech" change-over switch. When switched over to the "S" position the lower frequencies are suppressed (at 50 c/s by  $-10$  dB), whereby speech articulation is increased. In the "M" position the frequency response is not limited.

Average sensitivity in the range of 500 to 12,000 c/s ... min. 2.5 mV/N/sq.m

Frequency range 50 to 15,000 c/s

Directional characteristic: cardioid

Front-to-back ratio: 12 dB

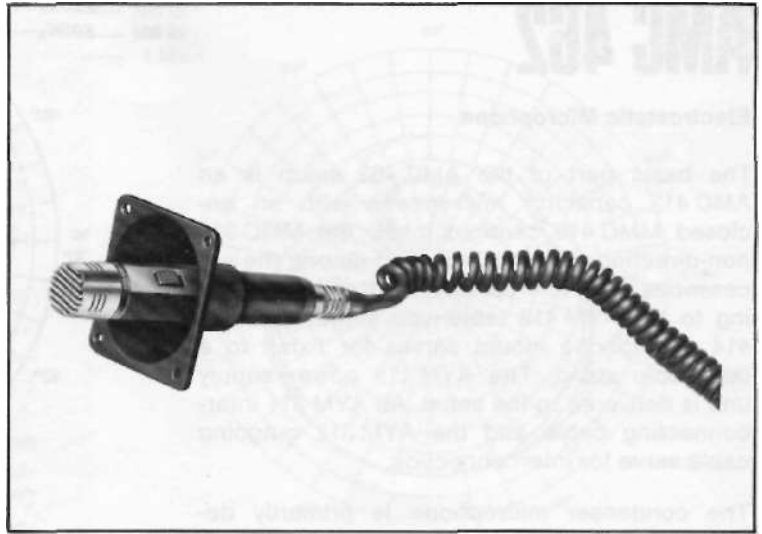


## AMD 270

A set of microphones for stereophonic records. Two electrodynamic AMD 210 microphones and one holder with AYM 351 or AYM 352 clamps allow stereophonic transmission by the X—Y intense stereophony system. The microphones are so selected that the difference in the values of their characteristic sensitivities does not exceed 3dB.

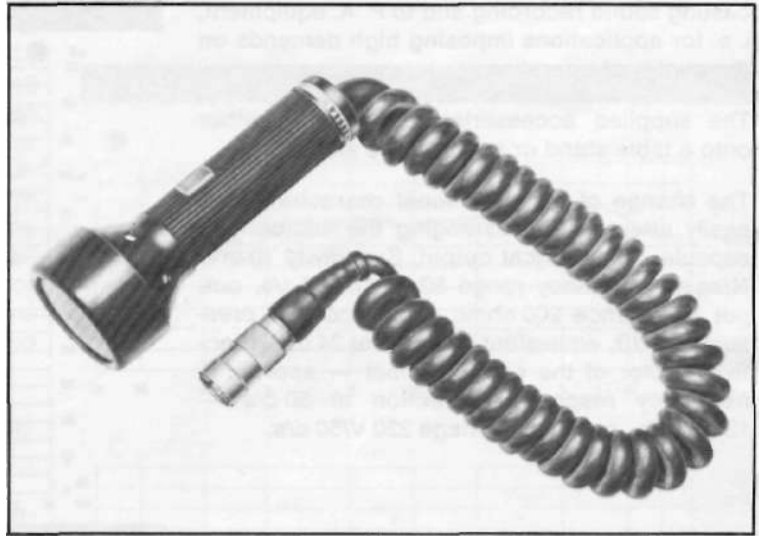
# AMD 530 I

Electrodynamical microphone primarily intended for use in means of transport. A two-position change-over switch, enclosed in the microphone, serves for automatic disconnection of the operation as soon as the microphone has been replaced into the holder (cradle). The 2 m long connecting cord is detachable. Sensitivity at 1 kc/s — 0.45 mV/N/sq.m, frequency range 100 to 10,000 c/s, impedance 200 ohms, directional characteristic ... of the double-loop shape ("8").



# AMD 622

Electrodynamical microphone used in means of transport. The microphone operation is controlled by a change-over switch. The 2 m long connecting cord is not detachable. Characteristic sensitivity at 1 kc/s — 20 mV/N/sq.m, frequency range 200 c/s to 8,000 c/s, impedance 100 kohms, directional characteristic — cardioid.



## RECOMMENDED USES OF THE TESLA MICROPHONES

Application

Type	Rated output voltage	Internal el. impedance	Minimum load impedance	Studio-engineering	P. A. system	Tape recorder	Dicta-phone	Reporting purposes
AMD 105	12 mV	100 kOhm	300 kOhm		●	●		○
AMD 107	12 mV	100 kOhm	300 kOhm		○			●
AMD 108	0.45 mV	200 Ohm	600 Ohm		●	●		○
AMD 200	0.75 mV	2 kOhm	6 kOhm	○	●	●		
AMD 202	0.3 mV	200 Ohm	600 Ohm	○	●	●		
AMD 210	0.75 mV	2 kOhm	6 kOhm	○	●	●		
AMD 523	0.75 mV	5 kOhm	15 kOhm			●		○
AMD 905	0.3 mV	75 Ohm	200 Ohm				●	
AMD 530 L	0.13 mV	200 Ohm	600 Ohm					*
AMD 626	0.3 mV	200 Ohm	600 Ohm					*
AMD 622	6 mV	100 kOhm	300 kOhm			○		*
AMC 462	3 mV	200 Ohm	600 Ohm	●	○	○		
AMC 470	3 mV	60 Ohm	200 Ohm	●	○	○		

For explanation of the specified technical data — see Page 34.

○ — can be used  
 φ — is recommended  
 \* — for use in means of transport



# AMD S23

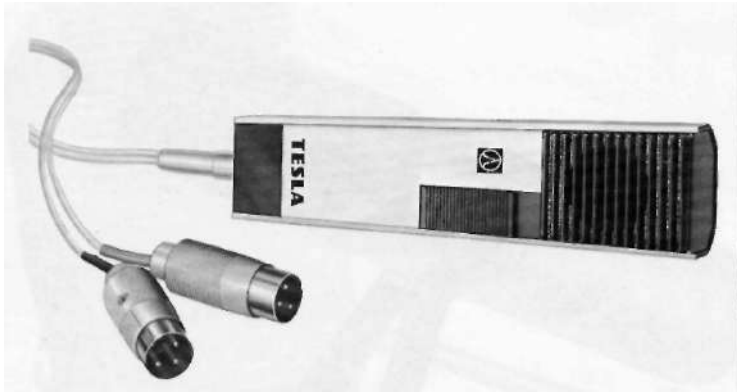
Electrodynamical microphone intended for use in connection with battery-powered tape recorders. Remote control is allowed by a built-in switch (a stop push-button).

Sensitivity at 1 kc/s min. 2.5 mV/N/sq.m

Frequency range 100 to 12,000 c/s

Internal el. impedance — 5 kohms

Directivity pattern: non-directional.



# AMD 905

This is a microphone primarily intended for dictaphones, it can also be used as a monitoring loudspeaker. The microphone encloses a three-position change-over switch and a push-button for controlling the dictaphone. Visual signalling is also provided in the microphone.

## Microphone

Sensitivity for speech —  
min. 1.5 mV/N/sq.m

Frequency range 350 c/s to 3,500 c/s

Internal el. impedance — 75 ohms

## Loudspeaker

The maximum power input when fed by a signal corresponding to the speech —  
250 mW,

frequency range: 350 c/s to 3,500 c/s, characteristic sensitivity: 73 dB/250 mW/0.5 m



# AMD 626, AMD 627

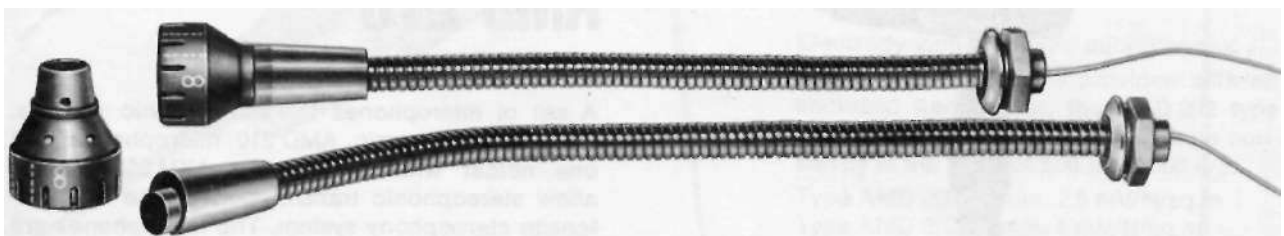
## Electrodynamical Gradient Microphone

Suited for transmission of speech from surroundings having a high noise level.

It is formed by an AMD 621 microphone which, with the aid of a connector provided with a flanged hose, can be fixed into a table.

The difference in marking (according to the length of the flexible hose) — Type AMD 626: the hose is 388 mm long; Type AMD 627: the hose is 518 mm long.

Sensitivity at 1 kc/s min. 1 mV/N/sq.m, frequency range 800 to 6,000 c/s, internal el. impedance 200 ohms, directional characteristic — the figure "8" shape.



# AMC 462

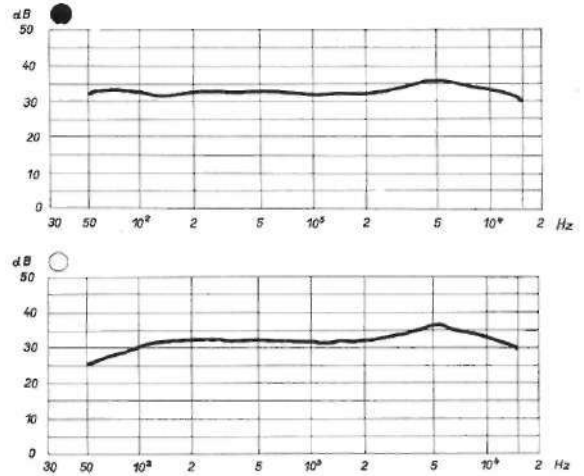
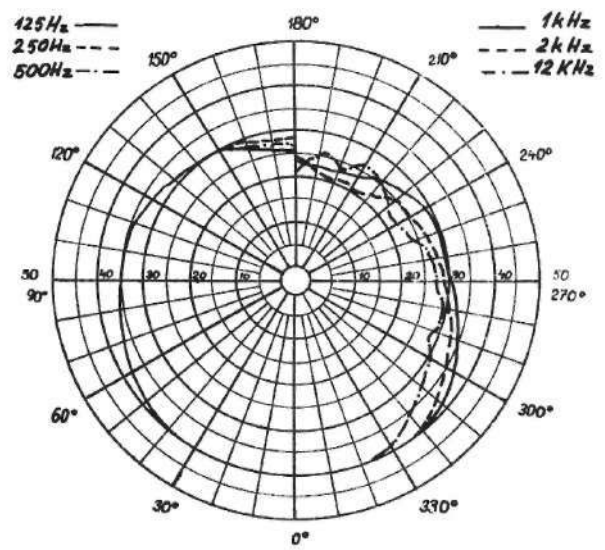
## Electrostatic Microphone

The basic part of the AMC 462 setup is an AMC 412 capacitor microphone with an enclosed MMC 410 cardioid inset; the MMC310 non-directional inset is supplied among the accessories. The microphone is intended for fixing to the AYM 413 table-type stand. An AYM 414 microphone mount serves for fixing to a telescopic stand. The AYM 412 power supply unit is delivered to the setup. An AYM 311 interconnecting cable and the AYM 312 outgoing cable serve for interconnection.

The condenser microphone is primarily designed to serve as an accessory item to broadcasting sound recording and to P. A. equipment, i. e. for applications imposing high demands on the quality of operation.

The supplied accessories allow fixing either onto a table stand or a telescopic stand.

The change of the directional characteristic is easily effected by exchanging the microphone capsule. Symmetrical output. Sensitivity 10 mV/N/sq.m, frequency range 50 to 15,000 c/s, output impedance 200 ohms, max. acoustic pressure 124 dB, equivalent noise level 24 dB, directivity factor of the cardioid inset — approx. 3, frequency response correction at 50 c/s — 12 dB min., powering voltage 220 V/50 c/s.



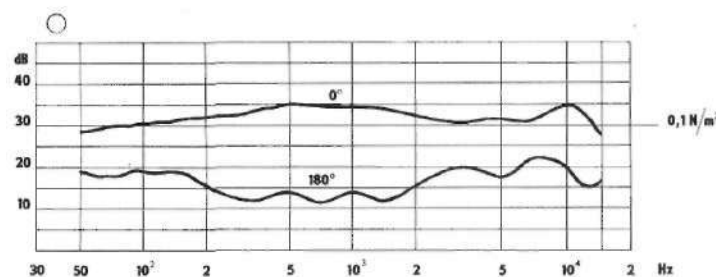
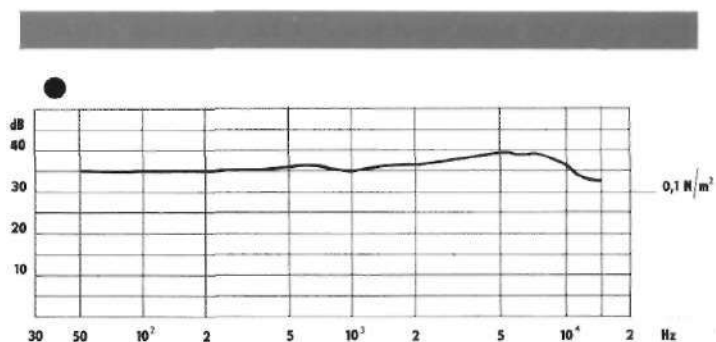
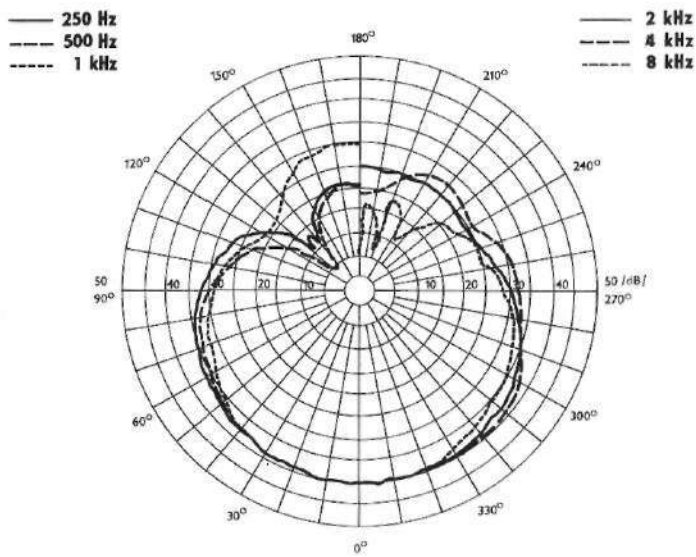
# AMC 470

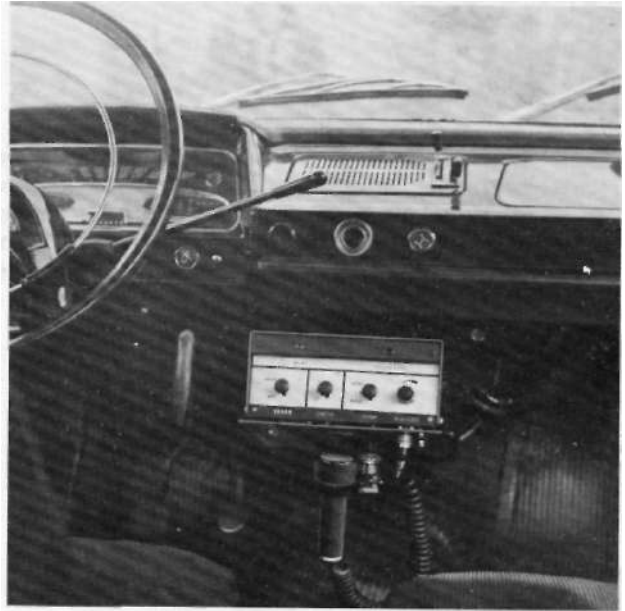
The AMC 470 is an electrostatic microphone; the setup is provided with all necessary accessories for use in a studio as well as for work in the open air.

Semiconductors are used both in the preamplifier as well as in the power supply unit. Accumulators for battery operation can be inserted into the latter — the supply unit serves simultaneously as a charger. The frequency response correction is adjustable (i. e. can be switched-over as required). The setup comprises an AMC 420 microphone with an MMC 420 cardioid inset, an MMC 320 non-directional inset, an AYM 420 power supply unit, an AYM 413 desk stand, an AYM 414 microphone holder, an AYM 411 interconnecting cable and an AYM 412 output cable. Symmetrical output. Frequency range 50 c/s to 15 kc/s, sensitivity 10mV/N/sq.m at 1 kc/s, internal el. impedance 60 ohms, equivalent noise level 28 dB, max. acoustic pressure 124 dB at 50 c/s, the directivity factor of the microphone fitted with cardioid inset 2,5 min. at  $f < 1$  kc/s and 3 min.  $f > 1$  kc/s. Frequency response correction 12 dB min. at 50 c/s; mains powering voltage — 220V/50c/s; enclosed battery (an NiCd accumulator) of 12 V.

# Frequency response of the inset with non-directional characteristic.

O Frequency response of the inset with cardioid characteristic.





# AZD 500

## ALARM AND BROADCASTING EQUIPMENT

The equipment is designed for sanitation-, mine rescue-, fire-fighting and public safety vehicles as well as for special-character motor cars.

With the aid of a loudspeaker system located on the vehicle roof, the AZD 500 equipment allows broadcasting of various reports, alarm sounds and/or musical programmes which can be heard within the audibility range of the vehicle.

The loudspeaker system together with a part of the amplifier can operate as a microphone with a pre-amplifier; in this way, various sounds from the vehicle neighbourhood can be picked up without the need of an external microphone.

### Technical Data:

Powering voltage of amplifier. . . . . 13 V  
 Equipment works reliably within whole control range (10.8 to 14.4 V) of dynamo relay switch.

### Loudspeaker system;

Impedance. . . . . 4 ohms  
 Rated power input . . . . . 60 W  
 Maximum power input. . . . . 90 W  
 Characteristic sensitivity. . . . . 103 dB  
 Minimum acoustic pressure in axis at a distance of 30 m from loudspeaker mouth. . . . . 100 dB

Frequency response of loudspeaker system. . . . . 250 Hz up to 2.5 kHz  $\pm 10$  dB  
 Frequency response of amplifier . . . . . 200 Hz up to 5 kHz  $\pm 3$  dB

The alarm tone frequency fluctuates regularly in range 450 to 1,800 Hz with repetition time. . . . . 1.3:1.6  
 Current drain at  $U_{nom} = 13$  V at no load without signal. . . . . 0.75 A approx.  
 at full excitation by the siren tone . . . . . 9.5 A approx.  
 Consumption of flash beacon. . . . . 6.5 A approx.  
 Rated permanent power of amplifier . . . . . 25 W  
 Rated permanent power of amplifier with siren operating. . . . . 45 W



# AZD140

## INTERCOMMUNICATION EQUIPMENT

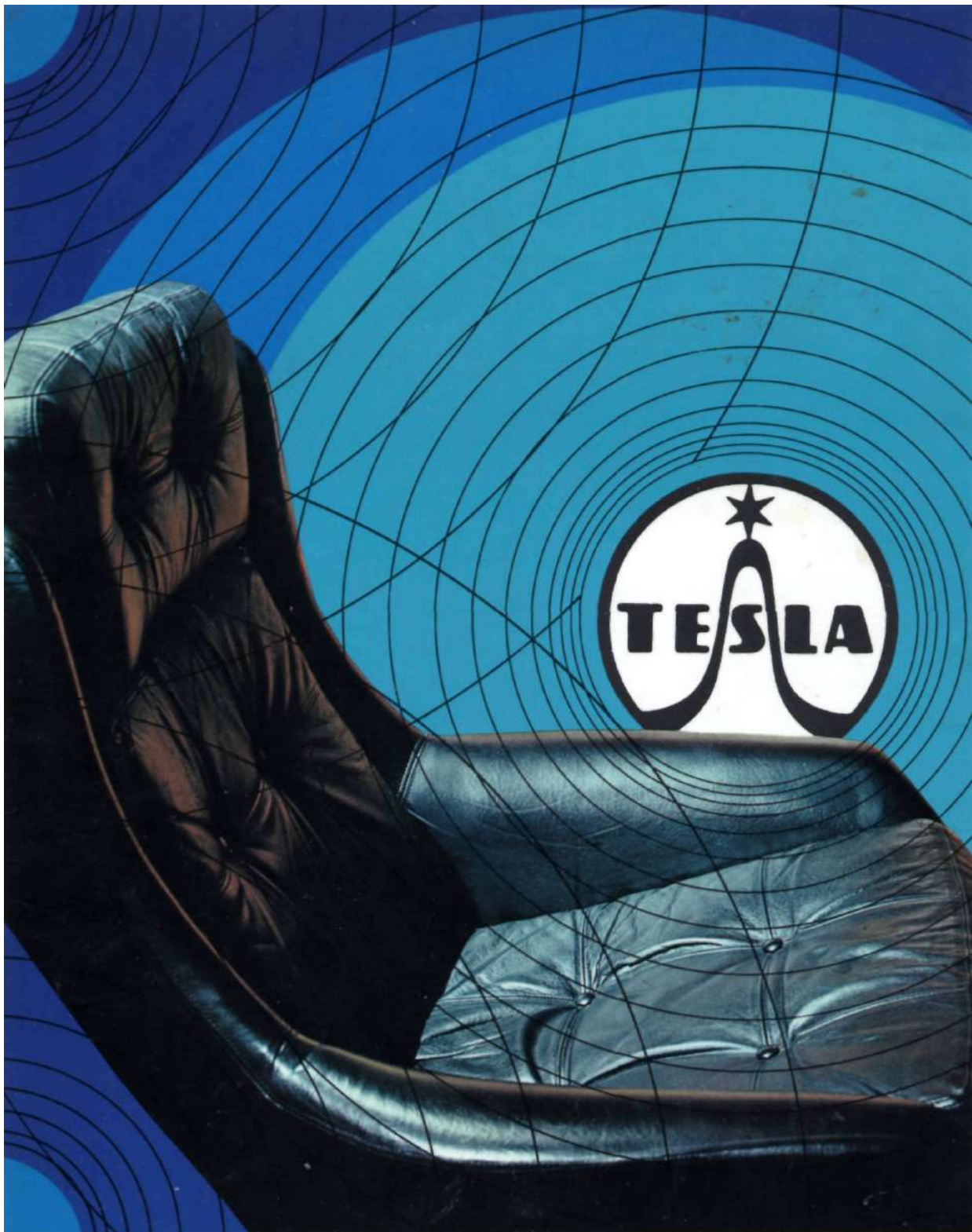
The equipment, of all-transistorized design, is primarily intended for use in hospitals and other health and social institutions it can, however, also be applied in other services. Features of equipment:

- Two-way distance conversation possibility between the nurse in attendance and the patient.
- With the aid of luminous signalling, the nurse can be called into the patient's room.
- The attending personnel just staying in one of the rooms or localities equipped with the signalling box can be informed that the patient is calling; the physician in his room can be notified in an analogical way.
- Communication facility between the attending nurse and the doctor and/or with **other** persons connected to the equipment by means of external loudspeakers (answering sets) on the equipment.

Facility of connection to tape recording, very simple servicing, elimination of any undesirable listening-in. Individual possibility of telephone calls connection.

Number of participants . . . . .	30 + 5 external ones
Number of room signal, positions . . . . .	12
Number of monitoring signal, positions . . . . .	unlimited
Output voltage of distrib. line . . . . .	24 V DC, 24 V AC





**PRAHA10 — Strasnice**

**Soudruzska 2081**

Telex 12 1483

12 4481

12 1704

12 1625

**EXPORT  
IMPORT  
KOVO**  
PRAHA  
CZECHOSLOVAKIA